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## An Investigation of Gifted Students' Perceptions Regarding Preferences Involving Competitive and Non-Competitive Learning Situations

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LOYOLA UNIVERSITY OF CHICAGO

AN INVESTIGATION OF GIFTED STUDENTS' PERCEPTIONS  
REGARDING PREFERENCES INVOLVING COMPETITIVE AND  
NON-COMPETITIVE LEARNING SITUATIONS

A DISSERTATION SUBMITTED TO  
THE FACULTY OF THE GRADUATE SCHOOL  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

BY

MARY CHRISTENSEN

CHICAGO, ILLINOIS

May, 1992

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and my husband, George,  
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## CHAPTER ONE

### INTRODUCTION

A number of educators working in the field of gifted education believe that gifted children's experiences with competition and extrinsic rewards such as gold stars, first prizes, grades, etc. can actually be detrimental to their motivation to learn despite the fact that these may be precisely the students who generally succeed in achieving such rewards (Meckstroth, Webb, & Tolan, 1982; Rogers, 1985). Clinkenbeard (1989) states "Competition generally has a "bad name" in the educational research literature." While it is not a revolutionary concept in the general field of educational psychology to decry the negative effects of competition, gifted education often take a different stance. In actual fact, competition is often strongly encouraged for gifted children. Many gifted students are constantly prodded to compete in contests and academic bowls, as well as being expected to maintain top of the class standing; for many, nothing less than being #1 is considered to be acceptable. Many researchers speak with deep concern with respect to potentially negative side effects which consistently

competitive experiences coupled with an emphasis on extrinsic rewards may generate in gifted students (Whitmore, 1980; Kaufman, 1989; Perrone, 1987). Whitmore has coined the term "paralyzed perfectionist" to describe a disabling syndrome of behaviors which strikes large numbers of highly able students who feel they must perform at all times at their "best." Kaufman proposes that pressures to exhibit errorless work must be reduced if these students' self-esteem is to be safeguarded. The extensive work of Kazimierz Dabrowski (1977), and the researchers who are continuing his work regarding the levels of emotional development in gifted individuals, suggests there may be potential for great internal turmoil when highly gifted individuals who value relationships are regularly placed in position to win, or "edge out" other students, their peers and friends (Piechowski, 1986; Silverman, 1987; Noble, 1989). Yet competitive experiences abound in many of these children's lives. A few such examples include: countless mathematics competitions, science fair competitions, and national competitions such as "Odyssey of the Mind" or "Future Problem Solving." For many, the daily school setting is another environment which beckons them to always "do one's best," where scoring 99% on a difficult test elicits the question, "Did anyone get 100%?" rather than a positive comment.

## RESEARCH QUESTIONS

The purpose of this study was to examine gifted students' perceptions regarding their preferences for competitive and non-competitive learning situations when cast in individualistic or collaborative/team settings. The primary research questions were:

- 1) Do gifted students prefer competitive or non-competitive learning situations?
- 2) Do gifted students prefer collaborative or individualistic learning situations?
- 3) Are the perceptions of gifted children regarding competition significantly different when the competition occurs in a team or collaborative setting vs. an individualistic setting?

Four sub-questions were also addressed:

- 1) Are there significant gender differences in gifted children's responses to competitive situations?
- 2) Are there significant age level differences in gifted children's responses to competitive situations?
- 3) Is there a significant difference between the perceptions of gifted students who have participated in specialized programs vs. those who are new to such programs?
- 4) Is there a significant correlation between parents' responses and their gifted students' responses?

Two current areas of research impact on these questions. They are the areas of research concerning the well-recognized problem of various forms of underachievement among the gifted,

and the considerable research involving cooperative learning. First, young gifted children generally begin the school experience with enthusiasm, though the fervor for school has been shown frequently to fade by the end of the primary years. (Whitmore, 1980; Kaufman, 1989; Rimm, 1986). However, during this initial period of the "romance relationship" with school, many young gifted students try very hard both to achieve, and to please the adults around them. Thus, one can anticipate that the majority of gifted at this age will reflect relatively undifferentiated profiles when examined regarding varying patterns of response to competitive learning; that is, not until the school experience has progressed beyond the early years, will the effects of problematic learning environments be evidenced.

Several researchers in the field of gifted education also reflect concern over the "mysterious disappearance of the gifted girl." (Fox, 1986; Silverman, 1986; Kerr, 1987). Evidence suggests that many superior ability females find it too difficult to appear exceptionally bright in their social and school environment. Tobias (1979) cites cases of mathematically precocious girls who admit to deliberately looking less capable due to pressures of highly competitive situations. Taylor (1982) states, "If it's unacceptable in our general society to be gifted, it's even more difficult to be female and gifted. For many highly capable young women, the pressures to "go underground," so as not to appear gifted,

begin to impede heavily at approximately the Junior High School level. (Silverman, 1986). Given this body of literature, one can anticipate that highly competitive academic environments will decrease to accommodate the preferences for this population of gifted female students.

Further, cooperative and/or collaborative learning is a well-recognized model for constructing appropriate learning environments. Slavin (1989), the Johnsons (1989), and others have reported positive results when versions of cooperative learning have been used with heterogeneous groupings of students. The gifted student in need of unusual curriculum adaptations who is therefore placed in very specialized programs, may seldom experience the benefits of learning in a collaborative setting if the nature of the program is that which emphasizes increased levels of achievement at a more rapid pace than typically seen. This is often a student who is frequently asked to participate in various forms of competition, ranging from heavy classroom pressure to excel above one's peers, to participation in highly visible contests in which he/she may represent one's school or organization. While Slavin himself is not a proponent of specialized classes for the gifted, he does speak in favor of certain types of acceleration practices, such as providing advanced mathematics instruction for bright middle or high school students, or allowing students in elementary grades to receive reading or math instruction at a higher grade level more matched to the

child's instructional level. (Slavin, 1990). However, despite some theorists' opposition to specialized homogeneous groupings of gifted children, based on the body of evidence supporting the positive social effects of the cooperative model (Johnson & Johnson, 1990), it is reasonable to expect fewer negative reactions to competition when such competition occurs in a team or collaborative setting.

#### THEORETICAL MODEL

Finally, Dabrowski's (1977) Theory of Positive Disintegration, presents a theoretical framework which interrelates with these two areas of research to suggest the rationale for the questions being addressed in the study at hand. Dabrowski's theory of the levels of emotional development of gifted individuals, known as The Theory of Positive Disintegration, includes the concept of dynamisms, the emotional forces which distinguish the developmental levels. The term 'dynamism' is used to indicate their dynamic potency to promote development. A key one of the findings regarding these dynamisms is the importance of social relationships for a great number of gifted persons. In accounting for the development of the gifted person, Dabrowski observed what he called "multilevelness" in human behavioral phenomena, and saw behaviors as ranking on a continuum from egocentric to altruistic; he also saw development as a process ranging from nonreflective (i.e., no apparent inner



life) to intensely self-aware (i.e., having maturely evolved psychological structures). His theory offers an explanation, not simply a description, of developmental transformations as a sequence of five levels. Each level is assumed to constitute a distinct personality structure.

Level I, called Primary Integration, is characterized by an egocentric perspective; those individuals operating at this level lack the capacity for self-examination or self-responsibility. There is a strong tendency to blame others when events go badly in the individual's life. Such persons may exhibit ruthless behaviors if it serves their personal ambitions.

At Level II, known as Unilevel Disintegration, the individual is primarily influenced by social pressures and mainstream values; they may exhibit a kind of moral relativism as there are not yet self-determined internal values. Hence they may appear ambivalent or indecisive when making decisions.

It is in the context of Level III, known as Spontaneous Multilevel Disintegration, that the person develops a hierarchical sense of values. Nelson (1989) states: "Inner conflict is vertical, a struggle to bring one's behavior up to higher standards. There is a dissatisfaction with what one is, because of a competing sense of what one could and ought to be (personality ideal). This internal struggle between higher and lower can be accompanied by existential despair,

anxiety, depression, and feelings of dissatisfaction with the self (inferiority, disquietude, astonishment)." In contrast to the Level II person who operates from a base of mainstream values, the Level III person senses that he/she must discover life's values at an internal level; the ensuing questions and struggles are no longer abstract issues, but intensely personal ones. "Not knowing answers can be anguish. When the soul finds its answers, they compel response from the life" (Nelson, 1989). Dabrowski also asserts the existence of the 'autonomous factor' (i.e., a driving will to grow through inner psychic transformation). If Level III development is to occur, the 'autonomous factor' must be present; it should be noted that this is not the case for the two previous levels. However, while Level III is clearly a far more interior response in terms of envisioning integrity and authenticity, the Level III person does not yet possess the means of truly attaining their ideals. In summary, Level III is considered the level of emotional tumult.

Dabrowski named the fourth level Organized Multilevel Disintegration. Such persons have found ways to reach their ideals and therefore are in the process of attaining self-actualization. They are often the leaders in our society because they are responsible individuals who possess the capacity for reflective thought & empathetic responses; these are deeply authentic individuals.

Level V, called Secondary Integration, is exhibited in

individuals whose lives reflect compassionate regard for the worth of the human person. Such persons' lives involve service to humanity; Nelson (1989) states: "Disintegration has been transcended by the integration of one's values and ideals into one's living and being." Level V individuals see and value the significance of each human person.

Within the context of The Theory of Positive Disintegration (TPD), Dabrowski explains why so many highly capable persons never evolve beyond Levels I and II. His concept of 'developmental potential' describes five types of 'increased psychic excitability' which he posits are indicative of developmental potential. Dabrowski terms these the 'overexcitabilities' (OEs), and sees these as some of the components of an individual's makeup. Piechowski (1979) describes the OEs as follows: "If more than one of these channels, or all five, have wide apertures, then the abundance and diversity of feeling, thought, imagery, and sensation will inevitably lead to dissonance, conflict and tension, but at the same time it enriches, expands, and intensifies the individual's mental development. At times the inner tensions and conflicts may be overwhelming. Still, the process of development must go on - an arduous passage from a lower to higher level - from external to internal control, from impulse to reflection, from sociability to empathy and compassion, from social norm to the norm of the ideal, from relative to universal values, from competition to service to others, from

possessive and security-seeking love to all-embracing love."

Dabrowski believed a highly influential OE is that of Emotional Overexcitability which manifests itself in a variety of behaviors. It may include intensity of feelings, inhibitions, anxieties, fears, guilt, and depression. According to Piechowski, a most notable aspect of emotional OE is relationship feelings. He states: "Richly differentiated interpersonal feeling "is the mainstuff of individual development from a lower to a higher level." (1979). Research done to date on the overexcitabilities has demonstrated that emotional OE, usually in combination with heightened intellectual OE, is the most significant of the OE's for indicating strong potential for advanced development. (Lysy & Piechowski, 1983).

Thus, it is a combination of one's makeup of OEs and of one's dynamisms which promote development through the levels; that is, the dynamisms serve as the impetus which advances the individual from one level to the next, while the OEs provide the building blocks of one's potential for development.

As stated earlier, Dabrowski believed the importance of social relationships to be a key aspect of the highly influential OE of Emotional Overexcitability. Thus, relationships in the gifted child's life are central to both his/her comfort and self-esteem, as well as continued development. A logical question therefore follows: What

might the consequence and potential damage be to the gifted child who is consistently placed in situations which expect one to compete with, and hopefully win out over one's peers and friends? Working from Dabrowski's Theory of Positive Disintegration regarding emotional development in the gifted, Silverman (1988) presents a description of gifted children as being highly sensitive, often introspective, and frequently showing highly developed levels of responsibility and justice toward others. Using the TPD as a framework for counseling, she speaks of "intense inner turmoils" which the gifted child often experiences as he/she wrestles with the variety of pressures which often impede simultaneously. The juxtaposition of these highly developed inner sensitivities with consistent pressure to "edge out" one's age-mates and/or peers, surely must be considered as a potentially problematic dilemma for such children.

#### LIMITATIONS AND SIGNIFICANCE OF THE STUDY

The main limitation of the study to be reported here involves the lack of a standardized instrument which could be utilized to probe the questions being addressed. As no previous research projects have examined gifted children's perceptions from the perspective taken here, the development of an original survey instrument was necessary. Every effort was made to design a valid and reliable survey questionnaire. This process of instrumentation development is described in

### Chapter Three.

Thus, this study addressed the nature of appropriate learning environments for gifted children. Currently, the field of gifted education reflects many theoretical divisions regarding formats and types of programs deemed appropriate. Renzulli (1988) favors a curriculum model which asks students to pursue highly original investigations suitable for promulgation in the "real" (i.e. adult world). His "Revolving Door Model" of program design allows students to participate in the specialized gifted services while they pursue their original investigation; when the investigation is completed the student must then "revolve out" of the program to allow room for another student to enter. To gain re-entry, a student must design a new project he/she wishes to pursue. Though such a plan appears quite democratic and just, implicit in this administrative design is the unstated presence of high levels of competition for entry into the gifted program.

VanTassel-Baska (1988) proposes various forms of academic acceleration, such as the Johns Hopkins SMPY model, as the appropriate form of programming for gifted students. According to the Hopkins program, junior high students gain entrance to specialized classes based on high levels of achievement as demonstrated by scores on out-of-level testing using the SAT test for college bound high school students. This procedure is also a highly competitive, achievement-oriented approach to gifted programming.

By contrast, Delisle (1988) speaks to the need for understanding the gifted youngster as a whole child whose intellectual capabilities cascade upon his/her total development, and therefore calls for attention to affective education issues as well as appropriate academic programming. Other researchers also reflect deep concern over the affective issues which need consideration when developing suitable programs and learning experiences for the gifted. (Perrone, 1987; Colangelo, 1986; Webb, 1987).

Further, it is well-acknowledged that underachievement among the gifted is a major problem. (Kaufman, 1989; Rimm, 1986). Whitmore's classic work in the California Cupertino project (1980) underscored the necessity for dealing first and foremost with affective and self-esteem issues when designing effective environments for underachieving gifted students who already had been "wounded by the system."

Concurrent with these concerns within the field of gifted education is the considerable research evidence in favor of collaborative models of learning though as yet such models have not been extensively researched in the framework of gifted education per se. (Robinson, 1990). Currently there is much lively debate regarding the appropriate use of Cooperative Learning with gifted children (Slavin, 1990; Robinson, 1990). Sound research is sorely needed to determine how collaborative learning environments might be successfully implemented for the gifted student. While the basic value of

cooperative models is not in question here, some gifted education theorists feel the automatic transfer of such models to gifted settings may be questionable. Robinson (1990) suggests that unexamined applications of such models may actually be tantamount to exploitation of the gifted student. She further states, "Opportunities which can meet their intellectual needs may be made unavailable to the talented students because cooperative learning is assumed to be a substitute." (p. 22).

The purpose here is to examine the gifted child's response to potential learning environments which offer opportunities for competition or non-competition both in the framework of individual or collaborative settings. This study was designed in an attempt to identify not only these students' preferences, but also those options which gifted students least prefer. It is essential to search for markers at both ends of the continuum of preferences since, as an educator, one may not always be able to create the perfect or idealized learning situation; however, avoiding the most distasteful options is surely a desirable goal, albeit minimal. Clearly, this is a much needed area of research if constructive developmental educational models for the gifted are to be created. Educators must attempt to understand the gifted student as a whole child with affective as well as cognitive needs (Silverman, 1990). It is therefore imperative that responsible educators faced with the task of designing



appropriate instructional models and learning environments gain insight into the gifted child's preferences regarding these issues.

## CHAPTER TWO

### REVIEW OF THE LITERATURE

As noted in Chapter One, the major focus of this research project was in gifted children's preferences for competitive and/or non-competitive learning environments and the possible impacting effects of such environments on the gifted child's affective development. Understanding the social and emotional needs of gifted children would seem to be a necessary prerequisite for determination of appropriate learning environments whether they are designed to be competitive or non-competitive. In a review of literature pertaining to the changes which have taken place in the specialized field of counseling gifted youngsters, St. Clair (1989) concluded that educational programs thus far have focused on academic achievement, and have left affective growth as somewhat of a second thought. She recommended that affective considerations become an integral part of the learning environments and structures of reputable gifted programs.

In this chapter, studies involving competitive & collaborative learning, age & gender differences among the gifted, and gifted child development will be discussed. Many

previous studies have been directed at the notion of the effects of competition and/ or extrinsic rewards. While such rewards are not necessarily always linked to competition, frequently this is the case, and therefore studies involving the linkage of these factors will be reviewed here. Several researchers have conducted self-report surveys or interview studies with gifted students; these findings will be summarized in an effort to show how they relate to gifted students' perceptions of the learning environment. And finally, a variety of approaches and studies have been crafted to address the relationships of self-esteem and affective development in the gifted individual; these studies will be examined as they relate to the issue of appropriate learning experiences for the gifted student.

#### Literature Relating To Competitive And Collaborative Learning

The design of positive school situations would seem to be based on an understanding of the implicit effects of various types of learning environments on the students for whom the environments are being created.

Several studies have probed the effects of competitive and individualistic factors on students' attitudes and/or achievement. Johnson, Maruyama, Johnson, Nelson, & Skon

(1981) conducted a meta-analysis of 122 studies in which they compared the effectiveness of cooperation, cooperation within inter-group competition, interpersonal competition, and individual goal structures in promoting achievement and productivity. Their analysis yielded the following conclusions: First, cooperation is much more effective than interpersonal competition and individualistic efforts; second, cooperation within inter-group competition is also superior to interpersonal competition or individual efforts; third, no significant difference was found between the effects of interpersonal competition and individualistic efforts. They further generalized that competitive situations in the classroom had negative effects on achievement. Covington & Beery (1976) also examined competitive goal structures within the classroom setting, and found the emphasis on social comparison and normative evaluation to have negative effects on self-worth. According to Nichols (1983), competition fosters an environment in which students experience learning as a means of demonstrating one's academic prowess; this eventually translates for the student that he/she must "beat" his peers; this is precisely the position in which many gifted children find themselves cast.

Ames and Ames (1981) similarly studied the effects of competitive learning, but with particular interest in its impact on motivation; they found that competitive vs. individualistic factors had very different effects on student

perception of motivation. In individualistic settings, success or failure was attributed more to effort, while in competitive settings success or failure was seen more as a function of luck. They also found a relationship between competition and student feelings of satisfaction with their performance. In individualistic situations, satisfaction related at least in part to how much the student had improved over prior performance. By contrast, satisfaction of those in competitive settings depended entirely on comparing one's own performance to that of other subjects.

According to Kohn (1991), who reviewed several studies relating to the use of extrinsic rewards in the context of cooperative learning structures, such rewards are the "enemies of exploration" (Condry, 1977), and serve to undermine intrinsic interest in the task. Among the studies reviewed was one relating directly to competition. In this investigation, Deci et al (1981) found that college students competing to solve a puzzle were less likely to continue working on such puzzles than were those who were not in a competitive situation. While these investigations were not done specifically in the context of gifted education, they are relevant to this study since it is the gifted child who frequently finds him/herself in highly competitive situations.

Robert Slavin (1991) takes a different position on the issue of extrinsic rewards as he states "There are at least as many studies that show just the opposite: that rewards

enhance continuing motivation or that they have no effect on continuing motivation." He cites studies by Bates (1979), Morgan (1984), and Lepper & Greene (1978), to support the finding that rewards increase motivation when the task involved is one that students would not do on their own without rewards. These views on extrinsic rewards pertain here, as competition is one form of extrinsic reward which is often employed by teachers, whether formally, as in the Teams-Games-Tournaments (TGT) cooperative learning method, or informally in less carefully structured classroom situations.

Michaels (1977) examined classroom reward structures as related to individual and group competition. Defining competition as "Negative reward interdependence among individuals or groups," he described four basic reward structures: individual reward contingencies, group reward contingencies, individual competitive contingencies, group competitive contingencies. Michaels found that individual competition was the most effective reward structure in strengthening independent task performance.

Bell (1989) examined dilemmas which block gifted girls' success in school. Though the focus of this study was one of therapeutic intervention, a theme which emerged in dilemma #2 described the girls' discomfort with achieving at the expense of others, i.e., in competition with others.

Clinkenbeard (1989) conducted a study with highly gifted young adolescents in which subjects were asked to respond to

a scenario in which a student was successful in either a competitive or a non-competitive, individualistic situation. This investigation examined what, if any, differences in expectations, motivations, satisfaction, and performance existed among 67 extremely gifted adolescents attending the Talent Identification Program's Summer Program. The study revealed that students' motivation to attend the program involved both academic and social factors. Responses further indicated that the subjects perceived greater continuing motivation, attribution of success to effort, and learning for the student in the individualistic scenario. Clinkenbeard concluded that a competitive goal structure may have negative effects which may be incompatible with important long-range educational goals.

Sobotnik (1988) investigated variables that characterize students who have achieved success in science. The subjects were gifted adolescents whose views on a variety of affective issues, including motivation for conducting scientific research, were explored. Sobotnik found that subjects identified curiosity as the primary impetus for research, not competition for achievement.

In a massive survey of 6000 gifted students, ages 6 - 13, spanning 37 states and U.S. territories, as well as Canada, Australia, and Germany, Delisle (1987) posed several questions which frequently surfaced responses related to issues involving competitive feelings and extrinsic rewards. Data

were reported anecdotally, as verbatim responses which Delisle felt typified large numbers of the surveyed population. When asked the question, "Do you ever try to hide the fact that you're gifted?" several cited responses reflected concerns about being measured competitively against one's peers. A nine year old Alaskan boy answered, "I try to hide my abilities so my friend Herman won't think I'm a show-off. And I don't like not being liked." An eleven year old Michigan girl responded, "Sometimes when my friends talk about 'how hard the test was' or 'I did so bad on that test' and I did well, I just don't say anything that might hurt their feelings or offend them." Similar concerns surfaced in response to the question, "How do people treat you when they know you're gifted?" A nine year old New Jersey girl said, "I've gotten almost all my spelling tests, math tests, and reading tests right. Some of the other kids don't at all. So they either say 'You cheated' or 'The teacher spends more time with you.' I really hate it. It drives me crazy." A ten year old California girl answered, "When we talk about report cards, my friends sometimes say I was 'teacher's pet' and that's why I got straight A's. It bugs me to know that's how my friends feel about me." In response to questions regarding handling expectations, a twelve year old Michigan boy stated, "The competition definitely gets harder when you get into higher grades, since everyone wants to be number one." An eleven year old Connecticut boy said, "If I fail a test (which is



likely for an average seventh grader) I am looked at as if I should be hanged because that is not expected of a child of 'my ability.'"

#### Summary of Part One:

While much research exists on the effects of competitive and collaborative learning, only a small number of studies have focused on these issues in the context of gifted learners and the types of educational environments frequently designed for them. Further, in many of the studies there exists a confounding overlap of the categories: competitive, individualistic, and collaborative. That is, some researchers appear to cast competitive and collaborative as opposing concepts, while others do not. Some researchers imply that individualistic goal structures are also competitive, while others, such as Clindenbeard, tie individualistic structures with intrinsic motivation. Still others view extrinsic rewards as necessary at least as motivational tools, while others, such as Kohn, favor intrinsic rewards as more effective for long-term motivation. Thus, much ambiguity still surrounds the question of competitive vs. non-competitive learning environments and the gifted child.

#### Literature Relating To Age & Gender Differences

##### Among The Gifted

Research on age and gender differences has examined a variety of aspects in regard to the gifted child such as

his/her response to the school experience, motivational factors, self-esteem issues, interests, etc. Examining the issue of competition among women, Tracy (1991) interviewed one hundred women, ages fifteen to seventy-five. She found that women consistently denied that they competed with other women for jobs, status, men, etc., and that women, unlike men, are socialized to deny their own competitiveness; continuing this denial process, she asserted, perpetuates failure at aboveboard competition, and destroys both friendships and professional contacts alike. Tracy concluded that only when women face their own need to define themselves through affirmative competition, as do men, can women hope to be free to explore their individual potential.

In a cross-sectional study of first through twelfth grade gifted females, Kline & Short (1991) examined the emotional resilience of gifted girls. Analysis of the data indicated a significant decrease in the self-regard and self-confidence throughout their school development. Similarly, levels of discouragement and perfectionism also rose during this same developmental time period. The researchers saw profound implications in their findings, i.e., emotional vulnerability increases by grade twelve while inner courage and self-assurance declines. They concluded that strong identity information and models should be presented in order to combat this dilemma.

Eccles (1987) examined differences in interest in Math

and Science among gifted females, and investigated the degree to which young women felt they were more or less capable in Math and English over time and the degree to which they valued these disciplines. She noted that it is not sufficient to simply describe these differences, but rather it is more valuable to search for factors which may influence the differences and distinguish females who choose to continue to select Math and Science courses and careers from those who do not. Examining the question, "What experiences occur in Math and Science classes that may be influencing the confidence and values of these girls," she noted a pattern of conditions that distinguishes math and science classrooms which reflect a successful history of retaining females' interest:

- frequent use of cooperative learning opportunities,
- frequent individualized learning opportunities,
- use of practical problems in assignments,
- frequent use of hands-on opportunities,
- active career and educational guidance,
- infrequent use of competitive motivational strategies,
- frequent activities oriented toward broadening views of
  - mathematics and physical science---presenting
  - mathematics as a tool in solving problems,
  - frequent use of strategies to ensure full class participation.

She concluded that these factors counteract out of classroom pressures and influences on females, and further supports the

need to examine these factors and means of intervening to counteract effects of negating messages which females receive from society regarding Math and Science participation.

In the context of her work with a multi-ethnic group of gifted girls in grades 3 - 6, Bell (1989) identified five core dilemmas which gifted females face. These dilemmas involve the social experience of the learning environment, and are seen as potential blocks to their success in school. She concluded that counselors and educators must become aware of these girls' needs and intervene by helping them to externalize and confront these dilemmas through group support.

When examining the Impostor Syndrome, Bell (1990) asserts that the doubting and discrediting of one's abilities and achievements is especially disabling for gifted women. Reasons for this phenomenon are seen as relating to three areas: Early messages & expectations; Definitions of competence, success, and failure; Realities of a male-oriented world. Clearly all three of these clusters of reasons relate, at least in part, to the female's experiences in the school environment, and therefore can be viewed as impacting on the design of appropriate learning environments for such students.

In Sobotnik's study (1988) of gifted adolescents' motivation to experiment, he found that female subjects reported more concern with social impacts of scientific

research and less variability in their self-image as a scientist than did their male counterparts; they also reflected a greater tendency than the males to attribute success to hard work and dedication rather than intelligence or creativity.

El-Najdawj (1989) studied middle school gifted achievers and underachievers for differences in self-concept. On profiles of self-perception, the girls considered themselves higher than the boys in behavioral competence, while the boys viewed themselves as higher in athletic and physical self-concept. El-Najdawj concluded that program modifications and strategies can alter patterns of achievement among the gifted.

Kramer (1988) studied the relationship of anxiety and perfectionism to attribution of failure in both gifted and non-gifted junior high school students. Anxiety and perfectionism were found to be significantly related with gifted students emerging significantly more perfectionistic than their non-gifted peers. Females were shown to be significantly more anxious and perfectionistic than their male counterparts.

In a study which compared the perceptions of parents of highly and moderately gifted children, Gaunt (1989) surveyed parents regarding their children's school experiences and apparent adjustment to the school environment. While significant differences did appear between the two groups, with parents of highly gifted students reflecting more

feelings of concern for social adjustment, few differences were reported based on age or gender of the students.

Luftig & Nichols (1991) investigated the social status of gifted elementary pupils enrolled in an educational pull-out program. The perceived personality, physical, and school attributes of the gifted students were assessed by their non-gifted peers. Significant gender differences were found; gifted boys were considered very popular, while gifted girls were considered relatively unpopular. Further, gifted girls were perceived as sad or moody, while the boys were seen as funny and having a good sense of humor.

Several authors have cited concern for the phenomenon known as "The Disappearance of the Gifted Girl." Writing from the perspective of appropriate intervention strategies, Olshen & Matthews (1987) present the position that underachievement among high potential girls begins approximately at the fifth grade level, and is widespread by junior high school age.

Arnold and Denny (1985) conducted a longitudinal study of male and female high school valedictorians and salutatorians. They found that women's estimates of their intelligence decreased between high school and their sophomore year in college as compared to their male counterparts; further, they reflected lower career aspirations and less ambitious goals as sophomores than they had reflected at high school graduation.

Kerr (1987) studied developmental patterns among gifted

females from two perspectives. First, she examined the lives of gifted women who had participated in a special program established in response to the Russian launch of Sputnik --- a program designed to "train the leaders of tomorrow." Four basic patterns emerged: homemaking in which one half of the women were employed; traditional female occupations, one quarter; dual career couples, a few; single professional career women, also a few. In an effort to understand why so many of these promising females had underachieved, she then turned to the lives of several recognized, eminent women, such as Eleanor Roosevelt, Georgia O'Keefe, and Maya Angelou. Believing that the lives of such women might expose more than formal research about surmounting barriers to achievement, Kerr sought to derive principles for guiding gifted girls. She concluded several key guidelines: the importance of time alone; the role of individualized instruction and childhood mentoring; guidance and encouragement during adolescence; refusal to acknowledge limitations due to gender; an ability to combine roles; a strong sense of personal identity; an ability to be responsible for oneself; and finally a sense of mission in one's life.

In her study of the Presidential Scholars of 1964-1968, Kaufmann (1981) sought to learn what had happened to this highly intelligent group. She located 501 (83%) of them and sent them each a forty-three item questionnaire; while the full intent of the study was not focused on gender

differences, some interesting results relating to gender patterns derived from the 322 respondents. The gifted women had achieved more than earlier studies, such as Terman's, had shown; however, they still received lesser salary compared to gifted men of comparable ability and education, i.e., they were often accomplished in their crafts, but poorly compensated. Marriage and childbirth rates among the women in Kaufmann's study were low compared to the general population.

Two studies probed the impact of gender on the identification of giftedness. Richert (1982) examined procedural methods and found that girls are disadvantaged in terms of identification procedures in a great many school districts. Similarly, Fox & Turner (1981) reported findings of several studies primarily involving the Johns Hopkins Math Talent Search. They found that a greater number of gifted boys are identified for specialized programming than are gifted girls, particularly during the secondary school years.

In Terman's classic, longitudinal study of giftedness, several findings emerged which relate to the gender issue among the gifted population. Among his earliest studies, Terman (1916) recorded that girls surpass boys in intelligence at all age levels up to age fourteen. Terman (1925) also found that gifted females tend to talk approximately three weeks earlier than do gifted boys. In a later study Terman & Tyler (1954) concluded that gifted girls also talk earlier than do



non-gifted female peers; they also reported that even the apparent differences in mathematical and science abilities, which favor boys, do not appear until the middle grades.

In an analysis of the Terman sample, Sears & Barbee (1977) examined the life satisfaction of the 430 gifted women in the study. All were born between 1902 and 1924, and had been selected for the longitudinal study based on a Stanford-Binet score of 135 or above. At the time of the Sears & Barbee study, the respondents were in their mid-60's. The researchers found several results which were contrary to original predictions which hypothesized that greater life satisfaction would be reflected by those women who had married, borne children, and engaged in some type of income-producing work. Instead, results found that career women reported more satisfaction and fewer regrets over life choices than did the homemakers. Among the 67 percent of the sample who had attained college degrees, women who chose to be housewives showed much less life satisfaction than those who chose to work outside the home. Single women were the most satisfied with their work choices, followed by married women with no children, divorced women, married women with children, and finally widows. Single heads of households, such as divorced, single, or widowed, were most often happier than married women. They noted that this pattern is distinctly discrepant from that of women in general. In normative samples, divorced, widowed, and employed women, reflect lower

life satisfaction than do housewives. They concluded that perhaps for high IQ women, the independence from an unhappy marriage and the challenge of creating one's own life as a single individual actually generates feelings of competence rather than depression. Several studies have examined the effects of sex-role stereotyping on giftedness. In studying the belief systems which negatively impact the likelihood of gifted girls achieving commensurate with their potential, Crandall, Katkovsky, & Preston (1962) reported that gifted girls have unrealistically low expectations of success, often surfacing as early as first grade. They also found that for boys a higher IQ correlated with expectations of success at learning a new task. However, the inverse was true for girls in the study; i.e., the higher the girl's IQ, the less well she anticipated doing. Walberg's (1969) study with teen-agers reported similar findings. For boys, IQ was positively correlated with expectations of success, while for girls, IQ was negatively correlated. More recently, Dweck (1983) conducted several studies which support these earlier findings. Among bright girls attribution of success is seen as related to chance factors and attribution of failures is seen as related to personality flaws. By contrast, boys were found to attribute success to their abilities and failures to lack of effort. Dweck also noted that while boys are often rebuked for lack of effort when they fail to succeed, girls often are helped, which is tantamount to being encouraged to

remain dependent; i.e., the help is interpreted as an indication that they are not capable of success on their own.

### Summary of Part Two

The understanding of age and gender differences among the gifted was discussed in this section. A larger body of research to date has been directed toward gender differences, with age factors most often examined secondarily. These numerous and varied results have emphasized a wide diversity of concerns, including: interests, expectations, self-concept issues, sex-role stereotyping and life satisfaction levels. Yet, little research is available on gender and age differences among the gifted with respect to competitive vs. non-competitive learning environments.

### Literature Relating To Gifted Students Perceptions Of The Learning Environment

The understanding and beliefs which educators hold regarding how their students perceive the learning milieu affects the construction and readjustments they make involving their gifted programs, curricula, and instructional methodologies. Several studies have examined students perceptions from a variety of perspectives. Galbraith (1983) interviewed and surveyed over 300 gifted students, ages eleven

through eighteen, on a wide range of topics; opinions regarding personal issues, school issues, and peer situations were solicited. Galbraith concluded that the number one concern of gifted children involves problems with school and the school environment.

Dauber & Benbow (1990) surveyed gifted 13 year olds who had been identified through the Johns Hopkins SMPY procedure. The self-report questionnaires focused on aspects of personality and peer relations. The researchers found that extremely precocious adolescents, in particular those who manifested verbal precocity, may be at greater risk for peer problems than their moderately gifted counterparts.

In a study involving 184 gifted adolescents, Kerr et al. (1988) surveyed students regarding their views on giftedness and its implications. A significant number of respondents reported positive feelings about their giftedness, but did not feel others were similarly positive. Several reported that they felt giftedness was positive for personal growth, but negative for social relations. The authors concluded that while the students' views on giftedness were not unidimensional, there was an overriding concern about the social stigma associated with the term.

Clark & Zimmerman (1988) interviewed twenty Indiana University Summer Arts Institute students, ages 13 - 17, regarding their views of themselves and of school. When describing their experiences in the school environment, most

interviewees mentioned difficulty finding friends at school who shared their interests.

In a study which investigated factors relating to the reversal of academic underachievement among high ability students, Emerick (1989) interviewed and surveyed ten subjects between the ages 14 -20 who had changed below-average academic achievement without planned intervention. All participants had exhibited giftedness at an earlier age, but subsequently underachieved for two or more years. Emerick isolated six factors which were seen as contributing to the reversal process. Among the factors were the teacher and the nature & content of the class; further, a need for personal interaction characterized these students. All three of these factors are directly related to the learning environment and the classroom experience.

In Delisle's (1987) 6000 respondent survey, questions pertaining to preferences involving the school environment were asked. Frequent responses to the question "Describe your idea of the perfect school day," included the following: A thirteen year old Kentucky boy, "A perfect school day would be when I could come to school and not be called 'the smartest kid in the world.'" A twelve year old New York boy, "If I learned to understand something new in most subjects." A ten year old Michigan girl, "It would be a day that we have an awards assembly. I would love it if most of my friends would win awards." In response to the question "What makes school

fun and interesting for you?" answers included: A seven year old New York girl, "Calm, quiet teaching. I hate noise and teachers when they yell." A twelve year old New York boy, "Serious problems, like considering every little detail on how to make a town more hospitable." An eleven year old New York boy, "I like working in groups." An eleven year old New York girl, "I like to be alone with the teacher and work directly with her." When asked "What could teachers do to make school more interesting for you?" students responded: A nine year old New York boy, "It would be nice if I was able to sit alone." A ten year old New York girl, "Don't spend the whole period explaining things --- just get on with it." An eleven year old Michigan girl, "Give us harder work in subjects where we're getting A's. Don't go on and on about a subject kids already know. Don't make us do an assignment that is too easy." An eleven year old Kentucky girl, "Don't say 'There was only one A and so-and-so made it.'" An eleven year old Michigan boy, "Excelling is allowed." In response to the question "How should a gifted program be different from regular classes?" students said: A ten year old Connecticut boy, "We should have more freedom to choose the things we want to study." A nine year old Kansas boy, "Harder work, tougher puzzles, or things that make us think." A ten year old Michigan girl, "I think a gifted program should have challenges, problems to solve, but most important, unstructured methods." An eleven year old Michigan boy, "I

think a gifted teacher encourages kids to set and achieve high goals; she'll challenge you and let the sky be your limit."

Silverman (1983) reported the perceptions of a highly gifted high school senior regarding her school experience; the following is an excerpt from the student's essay on school: "What can I say about school? It was a way of life for twelve years, a lesson in accommodation and retreat, a pervasive and debilitating servility which the circumstances thrust upon all of us, even the very strongest. It was a few ephemeral brilliances --- here a teacher deeply loved, and here another, years later. It was lesions in one's capacity to comfort and care...But most of all it was silence, an illimitable silence which pressed me ever deeper into myself, so that I felt myself growing weaker day by day, growing less human because I was treated as a student, as a thing, not as a 'she who,' but as 'it that.'" Silverman called this "A cry of outrage against the emotionally barren school environment," and concluded that such students require a unique mode of response from counselors and teachers in the learning environment.

### Summary of Part Three

The review of students' perceptions literature covered social issues, self-concept concerns, classroom preferences, and general response to the school experience. While most studies used a survey or questionnaire format, a few involved an anecdotal or case study approach. None of the researchers

directly addressed the question of preferences involving competitive or non-competitive learning situations.

### Literature Relating To Self-Esteem And Affective Development

Research on self-esteem and affective development of gifted individuals has studied a wide variety of aspects from self-concept to social relations to suicide. In Chapter 1 Dabrowski's Theory of Positive Disintegration was discussed as a framework for understanding the affective development of gifted persons; thus, it will not be re-examined here. However, many other researchers and theorists have also studied specific aspects of gifted development.

The self-concepts of gifted students are often measured as a part of the assessment of program outcomes. Kolloff & Moore (1989) studied the self-concepts of 508 gifted students in grades 5 - 10 who participated in summer programs. Self-concept scores at all grade levels were significantly higher at the end of the program. The researchers suggested three factors related to learning environments which may account for the rise in scores: first, the fact that they are gathered in a "safe environment;" second, the opportunity for the gifted student to simply "be him/herself" without the need to pretend to being less bright than they are in order to achieve social acceptance; third, the opportunity to develop lasting friendships. The authors concluded that in general, the



environments created in such programs appear to enhance self-concepts of gifted participants.

Based on a naturalistic study of members of Mensa, as well as research, case studies, and biographical material, Alvarado (1989) explored the potential difficulties associated with being highly intelligent or creative. She posits that the gifted individual frequently holds a different world view, and examines the conflicts and consequent coping styles which flow from this difference. The author stresses the necessity for gifted individuals to be given the opportunity to develop a coherent self-identity and group-identity; both of these factors are impacted by the school experience as the child develops.

Colangelo (1989) presented an example of the application within clinical counseling of the Theory of Positive Disintegration, Dabrowski's theory of emotional development of the gifted. A tapescript is presented in which a counselor applies TPD principles to the client, a gifted college student; it is frequently interrupted to demonstrate how the theory can be utilized with the gifted individual. Colangelo suggests that a new way of working with the gifted can be achieved in the framework of this theory, i.e., one which places emphasis on importance of the individual's overall emotional development.

Among the many questions considered by Terman (1925-59) in his classic longitudinal study of 1500 gifted children,

was the issue of affective development of these youngsters. He studied the social and emotional development of gifted children to discover how gifted children differ socially and emotionally from other children. Terman and his co-workers assessed their play interests and recorded their performance on tests of emotional stability, trustworthiness, and honesty. He also compared the character traits of over 1000 gifted children with traits of non-gifted children; although the differences between the two groups were small, he concluded that the gifted children were above average on all dimensions. It was noted, however, that Terman's subjects tended to play alone somewhat more than their non-gifted counterparts. They appeared to enjoy activities which require comparatively little social interaction such as reading, cards, chess, etc. Due to these interests, approximately one third to one half of the gifted children's sociability ratings fell below the lower quartile of the control group. Paradoxically, however, the gifted reflected more interest in social activities than the norm, with 84 percent of the gifted exceeding the mean of the control group in social interest. Terman (1925) noted that the children with whom the gifted preferred to play were usually older playmates.

Hollingworth's (1942) highly respected research supported Terman's findings. Particularly intrigued with prodigies, she studied the highly gifted and concluded that they were generally superior in emotional health, but with one

exception. The highly gifted in Hollingworth's studies appeared to suffer from a deficit in social relationships, a finding obviously in keeping with Terman's results. She wrote, "Such children are ordinarily friendly and gregarious by nature, but their efforts at forming friendships tend to be defeated by the scarcity of like-minded contemporaries" (Hollingworth, 1942, p. 302).

Shantz (1975) conducted a review of research on social cognition to examine the accuracy or inaccuracy of the popularly held belief that gifted children are socially inept, and concluded that advanced cognitive development is positively related to advanced social cognition.

In a study involving early readers in kindergarten, Scott & Bryant (1978) found that such children reflected greater social knowledge than did non-readers; further, their results revealed a significant correlation between social knowledge and social behavior for the young readers in the study. They also noted that the early readers had positive interactions with their peers, though they did tend to interact more with adults and less with their peers than did non-readers.

Reporting on a study involving social development in advanced young children, Roedell (1978) also found a positive correlation between social knowledge and intelligence, but not between social behavior and intelligence. One interpretation of this finding suggests that young children, like older children and adults, may be aware of social convention, yet

may not choose to act in accordance with these expectations. Others (Pendarvis, Howley, & Howley, 1990) have concluded that gifted youngsters are socially competent, but that some gifted children avoid social interaction with age-mates due to their preference for activities that are intellectually challenging. While this may result in preference for the company of older children or adults, it does not necessarily indicate emotional problems or instability.

Scholwinski & Reynolds (1985) examined anxiety levels in gifted children. This study, involving 500 subjects ranging in age from six to nineteen years, utilized the Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1985) which yields three factors of anxiety: physiological, worry/oversensitivity, and concentration. Scholwinski & Reynolds found that the gifted children demonstrated lower levels of anxiety than did their non-gifted age-mates.

A few studies have found gifted children to be more anxious or to have poorer self-concepts than their non-gifted peers. (D'Heurle et al., 1959; Freeman, 1979; Cornell, 1984). However, some critiquers (Pendarvis et al., 1990) assert that these studies were based on atypical samples of the gifted population, such as high IQ underachievers, or gifted children whose parents had sought intervention because of apparent behavioral problems.

Some researchers have examined the issue of suicide among the gifted population, and found common themes among the

subjects (Blachly, Disher, & Roduner, 1968; Paffenbargner & Asnes, 1966). In a meta-analysis of parts of Terman's work, Schneidman (1981) examined the data on a group of twenty men who had committed suicide and found some characteristics typical of this group. They were more likely than other gifted men: first, to have been rejected by their fathers; second, to have been disturbed as adolescents; third, to have been married several times; fourth, to have been alcoholic. In some cases a wide disparity was found between their stated aspirations and their actual accomplishments. However, this is not a consistent finding, as at least three of the suicidal men had been considered outstandingly successful.

#### Summary of Part Four

Literature regarding understanding of the gifted child's affective development was reviewed in this section. A consistent finding across many of the studies discussed here was the gifted student's difficulty in finding appropriate social relationships. Most researchers did not interpret this to be indicative of emotional problems, but rather to be the result of a "mismatch" between the gifted child's age-mate needs and intellectual needs. Other studies examined anxiety levels and depressive suicidal factors; research findings in this area were not as consistent. However, an apparent implication emerges here which is relevant to this study; namely, that the importance of social relationships continues to be a matter of concern for many gifted children.

### Recapitulation

This literature review looked at four main bodies of research. Initially studies involving competitive and collaborative learning were discussed since these are variables which directly involve the central research question here. Next, studies involving age and gender differences among the gifted were reviewed as these are two moderator variables which will be analyzed in this study. As the focus of this research involves the gifted child's perception of certain types of learning environments, following the age and gender discussion, studies involving gifted children's perceptions of the learning environment were examined. Finally, self-esteem and affective development research was discussed as the underlying concern of this study involves safe-guarding and nurturing the gifted child's social and emotional growth through appropriate educational environments. In all four areas the review of the research reflected a relative dirth of reliable data concerning competitive vs. non-competitive learning environments in the context of programming, curricula, or instructional methodologies appropriate for the gifted child.

## CHAPTER THREE

### METHODS AND PROCEDURES

This chapter includes five sections: the purpose of the study in terms of the basic research questions; a description of the subjects; instrumentation; data collection procedures; data analysis procedures.

#### Research Questions

As noted in Chapter One, the overall purpose of this study was to examine gifted students perceptions regarding their preferences for competitive or non-competitive learning environments in both individualistic and collaborative situations. The primary research questions addressed in the study were as follows:

- 1) Do gifted students prefer competitive or non-competitive learning situations?
- 2) Do gifted students prefer collaborative or individualistic learning situations?
- 3) Are the perceptions of gifted children regarding competition significantly different when the competition

occurs in a team or collaborative setting vs. an individualistic setting?

Four sub-questions related to the primary research questions were also addressed:

1) Are there significant gender differences in gifted children's responses to competitive situations?

2) Are there significant age level differences in gifted children's responses to competitive situations?

3) Is there a significant difference between the perceptions of gifted students who have participated in specialized programs vs. those who are new to such programs?

4) Is there a significant correlation between parents' responses and their gifted students' responses?

### Subjects

The sample ( $N = 358$ ) for this study was drawn from the Rosary College Gifted Child Programs. Students enrolled in those programs were invited to participate. This program serves students in both a "Saturday Seminars" format during the school year, and in an "Institute" and "CAMP" format during the summer. Students involved in this project ranged in age from 6 years to 11 years; grade levels ranged from grade 2 through grade 6, though the total program serves students through grade 9. Students are invited to participate in the Rosary College Gifted Children's Programs based on



their principal's certification that they meet the required criteria of 95'th percentile or above on a recognized standardized achievement test. The students are drawn primarily from a thirty mile radius surrounding Rosary College, in River Forest, Il. Every Fall nomination forms are mailed to principals in all schools within the designated 30 mile radius area. Occasionally, students at a greater distance request entrance to the program. Such students must also show evidence that they meet the 95'th percentile criteria for admission to the program. This systematic selection procedure yields a diverse population which includes urban and suburban, male and female, minority and non-minority students. Approximately 60% of the selected students come from public schools, and 40% come from non-public . Annual reports of the program reflect an average participation of approximately 600 students each summer. A total of 358 subjects responded to the survey. Of this group, 62.2% had not attended the program in previous years; 22.1% had previously attended for one year; 7.6% had previously attended for two years; 4.8% had previously attended for three years; and 3.3% had previously attended for four years. 46.8% were male, while 53.2% were female. Of the total sample group, 45.5% were eight years old or younger, and 54.5% were nine years old or older. This demographic data is summarized in Table 1.

The program itself is focused on intellectually

## DEMOGRAPHIC INFORMATION

Total Subjects	N = 358
Gender Data	Males = 46.8% ----- Females = 53.2%
Age Level Data	9 & Older = 54.5% ----- Under 9 Years = 45.5%
Program History Data	Previous Attendance ----- None = 62.2% ----- 1 Year = 22.1% ----- 2 Years = 7.6% ----- 3 Years = 4.8% ----- 4 Years = 3.3% -----

stimulating topics, usually heavily academic in nature. The day begins at 9:30 a.m., and concludes at 3 p.m. In the CAMP program for grades 2 - 4, the day is more diversified, however, to accomodate the younger age children. For example, CAMP students receive physical education and small group swim instruction on a daily basis. Students participating in the Institute program for grades 5 - 9 spend all day in their academic setting with the exception of morning and afternoon recesses, as well as lunch period recreation. Topics include mathematics, computer science, science, the arts and literature, as well as enrichment studies such as archaeology or inventions, and the Philosophy for Children program.

### Instrumentation

A survey instrument was developed to examine the perceptions of identified gifted students regarding their responses to competitive and non-competitive learning situations. Teachers were instructed to administer the survey during the student's participation in one of the programs. A written protocol (See Appendix) was given to each teacher administering the survey to insure consistency in the administration procedures.

Since students in Grades 2 and 3 differ in sophistication and extent of school experiences, a reworded version of both the survey and the protocol was needed to address the language

and developmental level of the younger child. In consultation with an Early Childhood specialist, the survey and protocol were adapted for these younger levels. (See Appendix.)

In an attempt to establish a relationship between the parent's and the child's perceptions of appropriate learning environments, an identical questionnaire was sent home with each child on the evening of the day the child had completed the survey in class. The accompanying letter (See Appendix.) requested the parent to complete the questionnaire according to their own feelings and beliefs regarding the kind of learning situation they perceive to be best for their child. The request was made that the completed survey be returned to the teacher on the following day. In the interest of initiating a future longitudinal study of giftedness, parents also were asked to indicate whether they would be interested in participating in a long-term study involving their child's personal and academic development.

In an effort to achieve face validity, the development of the survey instrument itself involved several stages and revisions. Initially, a questionnaire was developed which asked subjects to respond to three different sections of questions which were designed to yield a description of the respondents' feelings regarding the child's motivation and comfort level with respect to various types of competitive or non-competitive learning situations. For all questions, a Likert-style scale was used as the response mode. This

instrument was then piloted in a gifted program which served 51 students in a suburban parochial school. Analysis of the pilot data set reflected numerous inconsistencies which suggested that several of the items should be redesigned. With the joint advice of a number of experts from the fields of educational psychology, instructional design, and curriculum development, the instrument was systematically revised.

A major concern involved the length of the questionnaire; all felt that it should be shortened and simplified. Since the third section of the pilot survey had yielded some of the most revealing and promising results, this style of item was selected for inclusion in the actual instrument used in the study at hand. These items involved short scenario/vignettes to which subjects responded favorably or non-favorably. A second rationale for utilizing this type of item was based on the belief that gifted children are generally regarded to be capable of high levels of abstract verbal reasoning and problem solving abilities. Thus presenting them with problematic, but personally relevant vignettes, would ask them to utilize this perceived strength area. It was decided to use a maximum of five scenarios.

A second issue which concerned the expert advisors was the use of the Likert-style scale. It was suggested that discrete categories of response might be less ambiguous for students of this age, and result in fewer inconsistencies.

Therefore, four categories were targeted as possible options to follow each of the scenarios. The subjects responses would then be scored as nominal data.

In accordance with these expert suggestions, the investigator developed five scenarios involving competitive or non-competitive school-related situations; each was followed by four choices reflecting the four targeted categories. This revised instrument was then re-presented to the expert advisors for their systematic review. Suggested revisions at this point included a few slight changes of the scenario content. That is to say, the revisions involved minor stylistic issues involving the actual layout of the questions and response modes in an effort to insure clarity from a visual perspective.

The final version of the survey instrument (See Appendix.) was directed at assessing student preferences in two main categories: competition and non-competition. Each of these categories was further divided into individual and collaborative situations. In total then, four categories of possible response were possible, given the format of the survey.

Once again, the format for the survey was that of short scenario/vignettes followed by four choices, with each choice reflecting one of the above four categories. In all, five scenarios were constructed to present the student with problematic, school-related situations. Each scenario

described an aspect of the learning environment in such a way as to focus on the four variables of competition/non-competition and individual/collaborative environments. In every case the four choices which followed presented one option in each of the four categories: Individual Competitive, Individual Non-Competitive, Collaborative Competitive, Collaborative Non-Competitive. Students were directed to mark the option they would most prefer, and that which they would least prefer. An open-ended question was placed at the end of the survey to allow further student responses to the issues raised.

Demographic data included: Student name, Age, Grade, Sex, School, and Number of years participating in a gifted program.

Answers were coded 1 - 4 to indicate the four categories of response. Since the intent of the study included collecting data which reflects practices which are least desirable, as well as those which are optimal, coding procedures included procedures for categorizing the most favorite and least favorite option.

### Data Collection Procedures

Since the researcher was not the person who actually administered the surveys to the students, but rather the respective program teachers served as survey administrators, a general meeting was held to explain the procedures prior to

the opening of the classes. A total of 14 different teachers participated in the project.

At this initial meeting the teachers were informed that the survey was part of a study involving the comparison of competitive and non-competitive learning environment for gifted children. Care was taken to discuss neither the specific research questions, nor possible hypotheses, in order to avoid any possibility of prejudicing the teachers in such a way that they might subconsciously influence the students' responses, thereby possibly contaminating the findings from the study. Great emphasis was placed on the necessity of using the protocol given to them in order to insure consistency of administration procedures. Teachers were asked to select a relaxed time of day for administration of the questionnaire, and to assure the students that this was not a test of any kind. All were requested to choose Thursday of the student's class week; this measure was taken to avoid the possibility that some students of different classes might experience the survey on separate days and perhaps discuss their feelings regarding the questions with other students who had not yet participated in the research project. The above procedures were taken in an effort to support the internal validity of the study.

On Thursday afternoon, a duplicate survey accompanied by the explanatory letter to the parents was sent home with each participating child. Parents were requested to complete the



questionnaire and return it the next day. As noted above, the accompanying letter also requested parents to indicate whether they were interested in allowing their child to participate in follow-up surveys as part of a longitudinal study of giftedness and developmental issues involving their gifted child. A total of 152 parents responded to the survey. Of these, 51 parents gave permission for participation in the longitudinal study.

### Data Analysis Procedures

Nominal data was reported on the surveys. The two independent variables were competition and environment style. Level of competition was designated as high or low; environment style was designated either individual or collaborative in nature. Survey questions were constructed to clearly reflect competitive or non-competitive experiences in both individual and collaborative settings in order to minimize subjectivity in judgment. The three possible moderator variables of age, gender, and history were also carefully recorded for each subject. Age was broken down into an upper age group (nine years and older), and a lower age group (eight years and younger). Students in grades 4 - 8, who received the older child version of the survey were asked to indicate the number of years they had participated in the summer gifted program. For students in grades 2 - 3, history

in gifted programs was operationalized as "yes", if the student had attended the program last year, or "no" if the student had not previously participated in the program. Since the earliest a child may attend is grade 2, a "yes" response was coded as one year's prior participation, while a "no" response was coded as zero year's prior participation.

In this study, frequency distributions for responses to the five scenarios in both most favorite and least favorite categories were determined and from these percentages were calculated. Chi square analysis with the Phi or Cramer V measure of association were also used to test for significant differences and relationships across the most favorite and least favorite categories. The  $p < .05$  level was used to determine significance of findings. This analysis of crossbreaks procedure was used to examine the data from several perspectives:

First, responses to each of the five scenario/vignettes across each of the four categories (Individual competitive, Collaborative competitive, Individual non-competitive, and Collaborative non-competitive); this was done for most favorite and least favorite choice.

Second, responses to each of the five scenario/vignettes in each of the four categories as related to male/female gender differences; again most and least favorite choices were compared.

Third, responses to each of the five scenario/vignettes

in each of the four categories as related to the designated upper and lower age groups; most and least favorite were compared.

Fourth, responses to each of the five scenario/vignettes in each of the four categories as related to the student's prior history in the program; most and least favorite were compared.

Fifth, responses to each of the five scenario/vignettes as related to the variable competition or non-competition; most and least favorite were compared.

Sixth, responses to each of the five scenario/vignettes as related to the variable environment style (individualistic or collaborative); most and least favorite were compared.

Seventh, the total twenty responses to the five scenario/vignettes were examined to determine whether any particular choice emerged as significantly preferred or disliked by the participants.

Finally, the twenty responses were also examined with respect to gender, age, and prior program history differences with most and least favorite again being compared across subcategories.

The role of the parent in understanding and nurturing the gifted child has been cited as pivotal in the child's healthy development (Munger, 1983; Bloom, 1988); others (Ehrlich, 1985; Taylor, 1982) assert further that parents of gifted children are frequently so in touch with their child's

needs that they are actually more reliable identifiers of giftedness than are professional educators. This study was designed in such a way so as to permit the general testing of a possible relationship between the child's and parent's perceptions of the gifted program.

The Phi Test, sometimes called the index of mean square contingency, was employed to assess the correlation between a randomly selected sample of fifty pairs of the parent surveys and their matched son or daughter surveys. According to Backstrom (1981), the Phi Test is one of the most useful non-parametric statistics for survey data, and is used with nominal variables only. Inclusion in the sample selected here was determined by using every third parent survey which was returned, and then matching it with their child's responses.

## CHAPTER FOUR

### RESULTS

Each of the five scenarios was analyzed using frequency distributions in both most favorite and least favorite categories; resultant percentages were calculated respectively. Chi Square analysis with the Phi or Cramer V measure of association were also used to compare for significant differences between percentages. The Phi Test was also calculated to assess the correlation between a random sample of forty-five pairs of parent surveys and their matched son or daughter surveys. The  $p < .05$  level was utilized to determine significance of findings.

#### Findings Pertaining To Research Question One

Do gifted students prefer competitive or non-competitive learning situations?

Frequencies and percentages of the various responses for the five scenarios according to the categories competition and non-competition were determined both with respect to most

and least favorite preferences. Each scenario contained two competitive and two non-competitive options. Students initially rated one of the four options as their favorite. After all five scenarios were completed, students were asked to reread each and choose their least favorite option.

#### Results Pertaining to Most Favorite Category:

Results indicate a strong non-competitive preference for situations involving selection for a special program or classroom activities; results further indicate a strong competitive preference for participation in out of school contests; neither a competitive nor a non-competitive preference was indicated for situations involving grades or awards.

#### Scenario One:

As shown in Table 2A, in only one scenario did students clearly prefer a competitive option, i.e., Scenario One which described a situation involving an opportunity to represent one's school at an academic bowl or contest; 73.7 % of respondents chose competitive options, while 26.3% chose non-competitive options.

#### Scenario Two:

With respect to Scenario Two, which involved grades and academic Honor Rolls, only 52.5% of respondents selected

Table Two A

## RESEARCH QUESTION---ONE

## Results Pertaining to Most Favorite Category

Scenario	Competitive	Non Competitive
	(Collaborative & Individualistic)	(Collaborative & Individualistic)
1	73.7%	26.3%
2	52.5%	47.5%
3	37.3%	62.7%
4	38.2%	61.8%
5	49.3%	50.7%

competitive options, clearly not an overwhelming preference. 47.5% selected non-competitive options.

#### Scenario Three:

Scenario Three, which discussed entrance into specialized summer programming, yielded a reversal of preferences from those selected in the first two scenarios. Only 37.3% of students preferred competitive choices, while 62.7% preferred non-competitive choices. This appears a more noteworthy response than that of Scenario Two.

#### Scenario Four:

Similarly, responses to Scenario Four showed preferences for non-competitive options. This scenario described the classroom usage of time for various projects ranging from personal interest areas to competitive events' preparation. 38.2% chose competitive options, and 61.8% chose non-competitive options.

#### Scenario Five:

Scenario Five, which dealt with public presentation of awards, yielded nearly evenly-split results. 49.3% of students favored competition, while 50.7% favored non-competition.

Results Pertaining to Least Favorite Category:



Though teachers have a vast array of options, they frequently may not be able to provide the ideal situation; however, it is certainly desirable to at least avoid the most distasteful options. Therefore, students were also asked to choose their least favorite option for each scenario.

Results were more consistent when students were asked to choose these least favorite options. Students least favored competitive situations for grades and selection for programs. Results for situations involving participation in contests and classroom activities were equally divided. (See Table 2B.)

#### Scenario One:

Responding to Scenario One, 45.2% said competition was their least favorite, while 54.8% said non-competition was least favorite. By comparison to most favorite category reported above, this is a far more evenly divided response than was the 73.7% preference for the competitive options.

#### Scenario Two:

Results of Scenario Two presented interesting findings, as 58.6% responded that competition was their least favorite, and 41.4% responded that non-competition was least favorite. Comparing these findings with most favorite results, it appears that approximately as many students favor competition in the context of this vignette, as dislike it.

Table Two B

## RESEARCH QUESTION---ONE

## Results Pertaining to Least Favorite Category

Scenario	Competitive	Non Competitive
	(Collaborative & Individualistic)	(Collaborative & Individualistic)
1	45.2%	54.8%
2	58.6%	41.4%
3	80.9%	19.1%
4	48.7%	51.3%
5	67.5%	32..5%

### Scenario Three:

Analysis of least favorite category with respect to Scenario Three yielded results generally consistent with results of the most favorite analysis. 80.9% responded that competition was their worst choice, with 19.1% responding that non-competition was their worst choice. This appears roughly analogous to the favorite category on this vignette, in which 62.7% favored non-competition and only 38.2% favored competition.

### Scenario Four:

In the least favorite category Scenario Four yielded results which were virtually evenly split; 48.7% said they least favored competition and 51.3% least favored non-competition. This is not an analogous finding with respect to most favored category which showed non-competition clearly favored.

### Scenario Five:

Scenario Five also presented findings that were not a direct reversal of the most favored category which reflected an evenly split response. With respect to least favored options, 67.5% least favored competitive choices while 32.5% least favored non-competitive choices.

### Summary of Findings Pertaining To Research Question One:

Results support the importance of pursuing the understanding not only of most favored preferences, but also of most disliked options. In both categories, three of the scenarios yielded noteworthy results. This suggests that students' preferences regarding what they dislike are at least as defined as are their most favored preferences.

Further, the results suggest that the dominant responses to competitive options were negative, as competition was clearly preferred only in the first scenario involving academic bowls and contests, but not clearly preferred in any of the other cases. Supporting this finding are the students' responses to the least preferred category. In three of the five scenarios, students clearly indicated that competition was their worst option, and in both of the remaining scenarios, responses were nearly evenly split.

### Findings Pertaining To Research Question Two

Do gifted students prefer collaborative or individualistic learning situations?

Frequencies and percentages of the responses to the five scenarios according to collaborative and individualistic categories were calculated both with respect to most and least

preferred choices. (See Tables 3A and 3B)

#### Results Pertaining to Most Favorite Category:

Results indicate that students generally prefer collaborative over individualistic situations. Students indicated a strong preference for collaborative participation in contests, selection for special programs, and classroom activities; a strong preference for individualistic situations about recognition for good grades; no preference for rewards for grades.

#### Scenario One:

Analysis of the first scenario in terms of the most favored category clearly showed the overwhelming choices of students to fall in the collaborative options; 80.6% selected collaborative, while only 19.4% selected individual options. Clearly, most students said they preferred to attend academic contests as a member of a team.

#### Scenario Two:

Scenario Two, involving academic honor roll for grades, was the only vignette to which students clearly responded in favor of individualistic options. Only 36.6% selected collaborative, and 63.4% selected individualistic choices.

#### Scenario Three:

## RESEARCH QUESTION---TWO

## Results Pertaining to Least Favorite Category

Scenario	Collaborative	Individualistic
	(Competitive & Non Competitive)	(Competitive & Non Competitive)
1	15.5%	84.5%
2	36.7%	63.3%
3	16.8%	83.2%
4	28.5%	71.5%
5	43.0%	57.0%

Table Three A

## RESEARCH QUESTION---TWO

## Results Pertaining to Most Favorite Category

Scenario	Collaborative	Individualistic
	(Competitive & Non Competitive)	(Competitive & Non Competitive)
1	80.6%	19.4%
2	36.6%	63.4%
3	60.7%	39.4%
4	65.8%	34.2%
5	49.3%	50.7%

60.7% of respondents to Scenario Three, the vignette involving entrance into special summer programs, showed preferences in favor of collaborative options, while 39.3% preferred individualistic options.

#### Scenario Four:

Scenario Four showed even stronger preferences in favor of collaborative settings. 65.8% of students preferred collaborative, while 34.2% preferred individualistic choices. These results suggest that a clear majority of students prefer classroom learning situations which provide opportunities to work in group settings.

#### Scenario Five:

The last scenario involving public recognition and awards was the only one which yielded virtually evenly split results. 49.3% of respondents selected collaborative options, and 50.7% selected individualistic options.

#### Results Pertaining to Least Favorite Category:

Again, results were more consistent when students were asked to choose their least favorite situation. For each of the five scenarios, students least favored the individualistic choices.

#### Scenario One:



84.5% of responses to Scenario One indicated that individual options were their least favorite, while only 15.5% indicated collaborative were least favorite. This finding is consistent with most favorite results which yielded 80.6% answering collaborative were their most preferred options when relating to academic bowls and competitions.

#### Scenario Two:

Responding to Scenario Two, students again showed clear dislike for individual options. 63.3% disliked the individual choices; 36.7% disliked collaborative choices. Comparison to most favorite responses shows approximately the same number of students (63.4%) most prefer individual as least favor it. As this scenario dealt with grades and Honor Rolls, it seems that it is important to provide a variety of ways to give students academic feedback and/or reinforcement. This finding is analogous to findings regarding Research Question One involving this scenario, which also showed virtually equal numbers most and least preferring Competition.

#### Scenario Three:

Scenario Three also resulted in strong dislike being indicated for individual options. 83.2% said individual options pertaining to entrance into specialized summer programs were their least favored options, while only 16.8% least favored the collaborative choices.

#### Scenario Four:

With respect to Scenario Four, students' responses continued the pattern of dislike for individual options. 71.5% dislike classroom experiences which asked them to work alone; only 28.5% indicated dislike for group or collaborative types of classroom activities.

#### Scenario Five:

Finally, Scenario Five, which yielded evenly split results with respect to most favorite category, resulted in clear dislike for individual options when asked for least favorite choices. 57% least favored individual, while 43% least favored collaborative choices. Students appear to be saying that dislike involving types of public recognition are more clearly defined than are preferences.

#### Summary of Findings Pertaining to Research Question Two:

Results again clearly support the desirability of considering not only preferences, but also dislikes among gifted students. Based on these findings, as a group, gifted students' feelings regarding least favored options appear even more definitively articulated than are their favorite options. Working from the reality that teachers may not always be able to create the ideal situation, they can glean valuable insight into key experiences to avoid when designing learning

environments.

Clearly, this analysis of Research Question Two indicates that the majority of this population of gifted students favor collaborative learning experiences, but with one exception; i.e., situations in which grades are given as feedback for performance. In this case, almost twice as many gifted children said their favorite options were individualistic forms of response.

Results of the least preferred category were even more consistent, with all five scenarios showing clear dislike for individual options. Thus, it appears that teachers need generally to build varieties of collaborative experiences within their teaching strategies; however, according to Scenario Two, care should be taken also to build in individual grading responses and feedback for performance, if large numbers of gifted children's needs are to be met.

### Findings Pertaining To Research Question Three

Are the perceptions of gifted children regarding competition significantly different when the competition occurs in a team or collaborative setting vs. an individualistic setting?

Since competition and collaboration are not mutually

exclusive, frequencies and percentages of responses to the five scenarios according to the four categories of responses (Individual Competitive, Collaborative Competitive, Individual Non-Competitive, and Collaborative Non-Competitive) were examined both with respect to most favorite and least favorite categories.

#### Results Pertaining to Most Favorite Category:

Using a criteria of 10% difference for a particular cell, results indicate that in only one scenario was there a strong preference for a single category; students overwhelmingly prefer a Collaborative Competitive situation for out-of-school contests. Using a different criteria of 1/3 of students for a particular cell, students favored Collaborative Competitive in one scenario, Individual Competitive in one scenario, and Collaborative Non-Competitive in one scenario.

#### Scenario One:

As shown in Table 4A, the Collaborative Competitive option was the dominant selection in only one case, i.e., Scenario One. 64.0% of students chose Collaborative Competitive when responding to the scenario involving academic contests. 16.6% chose Collaborative Non-Competitive; 9.7% chose Individual Competitive, and 9.7% chose Individual Non-Competitive. This finding suggests that competition in this

Table Four A

## RESEARCH QUESTION---THREE

## Results Pertaining to Most Favorite Category

Scenario	Individual Competitive	Collaborative Competitive	Individual NonCompetitive	Collaborative NonCompetitive
1	9.7%	64.0%	9.7%	16.6%
2	36.4%	16.1%	27.0%	20.5%
3	8.7%	28.6%	30.6%	32.1%
4	10.0%	28.2%	24.2%	37.6%
5	30.6%	18.7%	20.1%	30.6%

type of situation is far more palatable when cast in a collaborative experience.

#### Scenario Two:

By contrast, results of Scenario Two showed Individual Competitive as the dominant response. 36.4% chose Individual Competitive; 27.0% chose Individual Non-Competitive; 20.5% chose Collaborative Non-Competitive, and only 16.1% chose Collaborative Competitive. As this scenario involved grades and Honor Roll awards, these findings suggest that greater numbers of students prefer to receive grades and feedback based on their individual performance rather than on team or group situations.

#### Scenario Three:

Responding to Scenario Three, the larger numbers of students selected Non-Competitive options. 30.6% selected Individual Non-Competitive; 32.1% selected Collaborative Non-Competitive; 28.6% selected Collaborative Competitive, and 8.7% selected Individual Competitive. These results suggest that the majority of gifted students prefer methods of determining entrance into specialized programs based on non-competitive procedures whether individual or collaborative.

#### Scenario Four:

Analysis of Scenario Four found that more gifted students

preferred Collaborative Non-Competitive classroom situations. 37.6% chose Collaborative Non-Competitive; 28.2% chose Collaborative Competitive; 24.2% chose Individual Non-Competitive, and 10.0% chose Individual Competitive. Students seem to be saying that group situations are favorite, most preferably in non-competitive settings.

#### Scenario Five:

Analysis of Scenario Five yielded nearly evenly split results with 30.6% selecting Individual Competitive, 30.6% selecting Collaborative Non-Competitive, 20.1% selecting Individual Non-Competitive, and 18.7% selecting Collaborative Competitive. Thus, with respect to public recognition and awards, student preferences appear spread across the four varieties of choices.

#### Results Pertaining to Least Favorite Category:

Analyzing Research Question Three from the perspective of least favored options again yielded an even clearer pattern of preferences than did most favored options. Using a criteria of over 10% difference for a particular cell, students least favored Individual Competitive in two scenarios, and Individual Non-Competitive in one scenario. Using the criteria of 1/3 of students for a particular cell, the least favorite choice again gives a clearer picture. Individual Competitive was chosen as the least favorite in all

five scenarios with percents ranging from 34.2% -71.6%. Individual Non-Competitive was chosen as the least favorite in two scenarios and Collaborative Competitive was chosen as the least favorite in one scenario. (See Table 4B.)

#### Scenario One:

Only in Scenario One did students deviate from this pattern. 47.4% responded Individual Non-Competitive was least favored; 37.1% least favored Individual Competitive; 8.1% least favored Collaborative Competitive, and 7.4% least favored Collaborative Non-Competitive (See Table 4B). Students appear to be suggesting individual options are least preferred, and that in the context of academic contests, competition is acceptable providing it is experienced in a team or collaborative setting.

#### Scenario Two:

Responding to Scenario Two, 41.1% selected Individual Competitive as their least favorite option; 22.2% least favored Individual Non-Competitive; 19.2% least favored Collaborative Non-Competitive, and 17.5% least favored Collaborative Competitive. These are particularly interesting findings when compared to student responses regarding their favorite options. As shown in Table 3, similar numbers of students most and least prefer the four categories of response. These analogous findings imply that teachers must



Table Four B

## RESEARCH QUESTION---THREE

## Results Pertaining to Least Favorite Category

Scenario	Individual Competitive	Collaborative Competitive	Individual NonCompetitive	Collaborative NonCompetitive
1	37.1%	8.1%	47.4%	7.4%
2	41.1%	17.5%	22.2%	19.2%
3	71.6%	9.3%	11.6%	7.5%
4	34.5%	14.2%	37.0%	14.3%
5	34.2%	33.3%	22.8%	9.7%

provide both competitive and non-competitive reinforcement in both individualistic and collaborative formats. Neither total adoption of group feedback and grades, nor total adoption of individualistic grading procedures appears to suit the needs of the gifted population. Rather, teachers must explore a variety of methods of feedback in order to optimally serve the students' needs.

#### Scenario Three:

Responses to Scenario Three resulted in the clearest findings regarding this research question. 71.6% of participants replied that Individual Competitive options were their least favorite choices. 11.6% said Individual Non-Competitive were least favorite; 9.3% said Collaborative Competitive were least favorite, and 7.5% least favored Collaborative Non-Competitive. These findings suggest that in large numbers gifted students dislike being selected for specialized summer programming by competing individually based on past performance.

#### Scenario Four:

With reference to Scenario Four which dealt with classroom projects and learning situations, 37.0% selected Individual Non-Competitive options as their least favorite; 34.5% selected Individual Competitive; 14.3% selected both Collaborative Competitive and Collaborative Non-Competitive.

clearly, these responses suggest that the majority of gifted students do not prefer classroom activities which ask them to work alone.

#### Scenario Five:

The fifth scenario involving public awards and displays of recognition further continued the pattern of dislike for individual and competitive situations. 34.2% said they least preferred Individual Competitive; 33.3% least preferred Collaborative Competitive; 22.8% least preferred Individual Non-Competitive, and 9.7% least preferred Collaborative Non-Competitive. Though the first two percentages cited here are virtually equal, it does not appear justified to conclude the same dislike for Collaborative, as only 9.7% dislike collaborative when cast in a non-competitive context. Rather, the data seem to be suggesting more a dislike for competitive, as this is the aspect common to both of the larger statistics here. As 22.8% dislike Individual Non-Competitive, it additionally appears that the individual aspect is also a common denominator for dislike, at least for a majority of the students in the study.

#### Summary of Findings Pertaining to Research Question Three:

Results of this analysis support the position that it is worthwhile to consider students dislikes as well as preferences when designing appropriate learning environments,

as the worst case data provided a more clear-cut pattern of response. Further, scenarios Two through Five showed students least preferring Individual Competitive options. This finding is particularly relevant to educators of the gifted, as frequently the types of programs offered to gifted students are heavily laden with both competition and individual pursuits and learning experiences.

#### Findings Pertaining To Research Question Four

Are there significant age level differences in gifted children's responses to competitive situations?

Chi Square analysis with Phi and Cramer V measure of association was calculated to compare for significant differences between the two designated age groups, "Under 9 years" and "9 & Older," in both most and least favorite categories.

The decision was made to report the results in terms of cases rather than as percentages. This was judged appropriate because this research question initiates the point in the study where the total population is segmented into various subgroups; further, as indicated on Table 5A, it is at this point that significance levels are also being reported. It was felt that a clearer understanding of actual numbers and their interpretation would be facilitated by this procedure. Similarly, Research Question Five, which breaks the total

population into even more specific subgroups, will be reported by this procedure.

#### Results Pertaining to Most Favorite Category:

Significant differences were found between children 9 and over, and under 9 in four of the five scenarios. (See Table 5A).

#### Scenario One:

Responding to the first scenario, gifted students in both age groups overwhelmingly selected the collaborative competitive option. 98 of the younger group, and 126 of the older group indicated that they favored attending academic contests as a member of a team.

#### Scenario Two:

This scenario, involving grades and academic honor rolls, presented significant differences in two respects. First, 75 students in the older age group clearly preferred the Individual Competitive response; additionally, the next most preferred response was Individual Non-competitive, as 54 students selected this. Thus, a majority of students 9 years of age and older appear to favor receiving their academic feedback on an individual basis. In the younger age group, responses were more evenly distributed across the categories, with Collaborative Competitive scoring the lowest; only 23

Table Five A

## RESEARCH QUESTION---FOUR

## Results Pertaining to Most Favorite Category

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9	9	98	27	29	.00009
	-----	---	---	---	---	
	9 & Older	25	126	7	29	
2	Under 9	49	23	38	51	.00003
	-----	---	---	---	---	
	9 & Older	75	32	54	19	
3	Under 9	15	44	41	62	.07825
	-----	---	---	---	---	
	9 & Older	15	54	64	48	
4	Under 9	14	33	51	61	.00261
	-----	---	---	---	---	
	9 & Older	20	63	31	67	
5	Under 9	44	37	44	35	.00019
	-----	---	---	---	---	
	9 & Older	61	27	25	70	

students chose this. An interesting shift in preference appears in the Collaborative Non-Competitive category; 51 of the younger students favored this, while only 19 of the older group showed this preference.

#### Scenario Three:

No statistically significant findings resulted from analysis of this data.

#### Scenario Four:

Responding to this vignette involving usage of class time, 61 students in the younger age group chose Collaborative Non-Competitive, and 51 chose Individual Non-Competitive. The influential factor here appears to be the non-competitive aspect. By contrast, 67 of the students in the older age group chose Collaborative Non-Competitive, with an additional 63 choosing Collaborative Competitive; here the common factor appears to be the collaborative aspect rather than the non-competitive.

Opinions diverged sharply between the two age groups with respect to the Collaborative Competitive category; almost twice as many older students (63) preferred Collaborative Competitive as did the younger students (33). Since both groups selected the Collaborative Non-Competitive option as their first preference, this additional finding suggests that the competitive aspect feels somewhat more acceptable for the

older students, providing the competition remains in the collaborative setting.

#### Scenario Five:

With respect to this vignette concerning public recognition and awards, younger students' responses were more evenly spread across the four categories than were their older counterparts. Where clear preferences did not emerge for students under the age of 9 years, the older group showed marked preferences. 70 of those 9 years and older favored Collaborative Non-Competitive; 61 favored Individual Competitive. These numbers stand in contrast to the remaining two categories which were preferred by 27 and 25 students.

#### Results Pertaining to Least Favorite Category:

Significant differences were found between children 9 and over, and under 9 in two of the five scenarios (See Table 5B).

#### Scenario One:

For students below the age of 9 years, the most distasteful option was clearly the Individual Competitive category; 82 of this age group responded they did not prefer to compete individually at academic bowls or contests. 42 indicated dislike for the Individual Non-Competitive option. Thus, it seems that a dominant number of this younger age group least prefer the individual options. Students in the



Table Five B

## RESEARCH QUESTION---FOUR

## Results Pertaining to Least Favorite Category

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9	82	20	42	17	.00000
	----- 9 & Older	--- 44	--- 8	--- 119	--- 8	
2	Under 9	65	36	30	27	.07496
	----- 9 & Older	--- 74	--- 23	--- 45	--- 38	
3	Under 9	108	17	23	12	.27991
	----- 9 & Older	--- 132	--- 14	--- 15	--- 13	
4	Under 9	67	25	47	18	.00755
	----- 9 & Older	--- 47	--- 22	--- 75	--- 29	
5	Under 9	55	51	32	20	.27167
	----- 9 & Older	--- 59	--- 60	--- 44	--- 12	

older age group, however, responded somewhat differently; 119 least preferred Individual Non-Competitive, while 44 least preferred Individual Competitive. While students over 9 years of age seem to agree with their younger counterparts that individual options are distasteful, this older group appears to find the competitive aspect more acceptable than do the younger students.

#### Scenario Two:

No statistically significant findings resulted from the analysis of this data.

#### Scenario Three:

No statistically significant findings resulted from the analysis of this data.

#### Scenario Four:

Students under the age of 9 years again reflected their dislike for individual options when responding to this scenario involving classroom usage time for various projects. 67 said their "worst choice" was the Individual Competitive option; 47 least preferred Individual Non-Competitive. In the older age group, 75 students least favored Individual Non-Competitive, while 47 least favored Individual Competitive. Thus, patterns for both age groups' least favorite options remain consistent with their responses to Scenario One.

### Scenario Five:

No statistically significant findings resulted from the analysis of this data.

### Summary of Findings Pertaining to Research Question Four:

Results of this analysis suggest that collaborative options are generally preferred by both age groups of students. Of the four scenarios in which statistically significant findings occurred, students under the age of 9 years chose collaborative options for all four scenarios. Further, the remaining fifth scenario also showed a preference for the Collaborative choice.

Students in the age group 9 years and above, also chose collaborative options with respect to three of the four statistically significant findings. The only case in which they disagreed with their younger counterparts occurred in Scenario Two, in which they clearly indicated the Individual Competitive option over any of the others.

Analysis of the data regarding least favorite responses reflected dominant negative responses to the Individual Competitive category. While only two of the scenarios resulted in statistically significant findings, namely Scenarios One and Four, in both cases students under 9 years responded that Individual Competitive was least favored. Further, this younger group responded similarly in all three

of the remaining scenarios. The older group of students differed with the younger group in both Scenario One and Four, i.e., those scenarios which yielded significant results; students 9 and above responded that Individual Non-Competitive was their least favorite choice in both of these cases. Clearly, individual options fared badly at both age group levels. Although older students appear to find them somewhat less distasteful in competitive situations, the Individual Competitive category fared second worst with this older age group.

#### Findings Pertaining To Research Question Five

Are there significant gender differences in gifted children's responses to competitive situations?

Controlling for gender, Chi Square analysis with Phi and Cramer V measure of association was calculated to analyze for significant interaction between age groups and gender differences in both most and least favorite categories.

#### Results Pertaining to Most Favorite Category:

As shown in Tables 6A and 6B, significant differences were found between males 9 and over, and males under 9 as they responded to Scenarios One and Five. Significant differences were found between females 9 and over, and females under 9 as they responded to Scenarios One, Two, and Five.

Table Six A

## RESEARCH QUESTION---FIVE

## Results Pertaining to Most Favorite-Males Category

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9	4	36	10	12	.03009
	9 & Older	14	70	5	11	
2	Under 9	21	10	12	19	.05617
	9 & Older	37	20	28	13	
3	Under 9	7	19	11	25	.27800
	9 & Older	9	30	29	28	
4	Under 9	9	14	18	21	.07970
	9 & Older	11	36	14	13	
5	Under 9	17	14	16	15	.00322
	9 & Older	29	17	7	43	

Table Six B

## RESEARCH QUESTION---FIVE

## Results Pertaining to Most Favorite-Females Category

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9	4	59	17	17	.00208
	----- 9 & Older	--- 11	--- 56	--- 2	--- 18	
2	Under 9	28	13	23	32	.00034
	----- 9 & Older	--- 38	--- 12	--- 26	--- 6	
3	Under 9	8	24	30	35	.26283
	----- 9 & Older	--- 6	--- 24	--- 35	--- 20	
4	Under 9	5	18	32	39	.05461
	----- 9 & Older	--- 9	--- 27	--- 17	--- 34	
5	Under 9	26	23	26	20	.04807
	----- 9 & Older	--- 32	--- 10	--- 18	--- 27	

### Scenario One:

Males in both age groups (36 in the younger group, and 70 in the older group) clearly favored the Collaborative Competitive option regarding academic bowls and contests, as did females in both age groups (59 in the younger group, and 56 in the older group). Clearly, the students in this population, whether older or younger, male or female, showed marked preference for participating in academic contests in a team context. Neither age differences, nor gender differences appear to influence their preference; however, results show this to be a very dominant preference, and one which is statistically significant for both males and females.

### Scenario Two:

Results from this analysis yielded highly significant findings for females, but findings approaching significance for males. The Individual Competitive category was the dominant choice in both male age groups with 21 males under age of 9 years, and 37 who were 9 years and older preferring it. For males under the age of 9 years, the least chosen category was Collaborative Competitive, while males 9 years of age and above least frequently chose Collaborative Non-Competitive. It appears that the males are indicating a clear preference for feedback on an individual basis rather than on a group basis.

Highly significant results occurred from the females responding to this scenario. Under the age of 9 years Collaborative Non-Competitive was the most frequently chosen option with 32 girls selecting it. By contrast, however, this was the least frequently selected option by girls 9 years and older, as only 6 females in the older group chose this. The dominant choice for the older age females was the Individual Competitive category, with 38 girls selecting it. In the younger age group, Individual Competitive was the second most frequently selected choice, as 28 females under 9 years chose it. Further, an additional 23 girls under 9 years selected Individual Non-Competitive. The second most frequently chosen option among the older females was also Individual Non-Competitive. Thus, it seems that the older girls clearly prefer individual feedback/grades, while the younger girls' preferences generally agree, but are less clearly defined.

#### Scenario Three:

No statistically significant findings resulted from analysis of this data, neither with respect to males nor females.

#### Scenario Four:

No statistically significant findings resulted from analysis of this data with respect to the males' responses. However, findings approaching significance did result with



respect to the females' responses.

39 females under the age of 9 years favored Collaborative Non-Competitive; similarly, 34 females 9 years and older favored this category; thus, it became the dominant choice of both age groups. The two age groups also remained consistent in terms of their least frequently selected option which was Individual Competitive, with only 5 of the younger girls and 9 of the older girls choosing this option. These results suggest that the females in general prefer to use class time in group or collaborative experiences, with very few of them favoring classroom experiences which focus on competition on an individual basis.

#### Scenario Five:

Results of this data were significant for both males and females. While males under the age of 9 years distributed their preferences rather evenly across the categories, a distinct shift of preference can be observed between the two age groups with respect to the Collaborative Non-Competitive category. Only 15 of the younger group selected this, but 43 of the older boys favored Collaborative Non-Competitive with respect to public recognition and awards events, thereby making it a clear and dominant choice among the older group.

Females' responses differed somewhat from their male counterparts. The category of Individual Competitive fared the best with girls at both age groups, with 26 of the younger

group and 32 of the older group preferring it. Again, at the younger ages, responses are rather evenly distributed across the categories, as they were for the males. However, a marked difference between Individual Competitive and Collaborative Competitive is observed at the older ages, as only 10 girls 9 years and above favored the latter, while 32 favored the former. In terms of the issue of public awards and recognition, the girls favor Individual Competitive, whereas the boys do not favor it.

#### Results Pertaining to Least Favorite Category:

As shown in Tables 7A and 7B, significant differences were found between males 9 and over, and males under 9 with respect to Scenario One, Two, and Four. Significant differences were found between females 9 and over, and females under 9 with respect to Scenario One.

#### Scenario One:

28 males under the age of 9 years indicated that Individual Competitive was their least favorite option, with an additional 14 of this age group indicating Individual Non-Competitive was least favorite. This differs sharply with responses of males 9 years and older; 63 of this group least favored Individual Non-Competitive, while an additional 21 least favored Individual Competitive. Thus, the preferences of the two groups appear to be reversed with respect to this

Table Seven A

## RESEARCH QUESTION---FIVE

## Results Pertaining to Least Favorite-Males Category

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9	28	13	14	7	.00000
	----- 9 & Older	--- 21	--- 4	--- 63	--- 7	
2	Under 9	20	20	10	11	.00174
	----- 9 & Older	--- 43	--- 8	--- 23	--- 21	
3	Under 9	35	7	12	7	.50479
	----- 9 & Older	--- 63	--- 11	--- 12	--- 7	
4	Under 9	26	11	14	9	.01196
	----- 9 & Older	--- 25	--- 8	--- 43	--- 16	
5	Under 9	22	20	9	9	.16098
	----- 9 & Older	--- 31	--- 31	--- 25	--- 6	

Table Seven B

## RESEARCH QUESTION---FIVE

## Results Pertaining to Least Favorite-Females Category

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9	51	7	28	10	.00000
	----- 9 & Older	--- 23	--- 4	--- 56	--- 1	
2	Under 9	43	15	20	16	.65417
	----- 9 & Older	--- 32	--- 15	--- 22	--- 17	
3	Under 9	70	10	11	5	.06522
	----- 9 & Older	--- 69	--- 3	--- 3	--- 6	
4	Under 9	41	13	32	8	.11039
	----- 9 & Older	--- 22	--- 14	--- 32	--- 13	
5	Under 9	33	28	23	11	.72171
	----- 9 & Older	--- 28	--- 29	--- 19	--- 6	

scenario involving academic contests. However, it remains evident that the boys are consistently saying that they do not favor attending such academic events on an individual basis. Only 4 boys in the older age group, and 13 in the younger age group, least preferred Collaborative Competitive; these data suggest that for the great majority of males, academic competitions are at least acceptable, if not even preferred, learning experiences.

Responses from females resulted in a similar pattern of least favored options. Individual Competitive was least favored by females under the age of 9 years, with 51 selecting this category; an additional 28 least favored Individual Non-Competitive. In the older age group, 56 girls least preferred Individual Non-Competitive, while an additional 23 least preferred Individual Competitive. Thus, the same reversal can be observed here, as was seen with the male age groups. Similarly, very few females in either age group least preferred Collaborative Competitive, and hence the data suggest that the great majority of females also find academic contests at least acceptable, if not preferred, so long as the competition occurs in a collaborative or team setting.

#### Scenario Two:

No statistically significant findings resulted from analysis of this data with respect to the female group. Findings with respect to the males, however, were highly

significant. In the younger age group the boys clearly preferred the competitive options with 20 boys choosing Individual Competitive, and another 20 choosing Collaborative Competitive. The dominant least favorite choice among the older age group was Individual Competitive, with 43 of the boys least favoring it, but only 8 least favoring Collaborative Competitive. While the majority of the younger boys appear to dislike competitive feedback and grading in general, a significant number of the older boys appear to dislike such competitive grading when cast in an individual situation. It should be noted, however, that similar numbers of males responded that Individual Competitive options were their preferred choice with respect to grading and feedback. Again, these findings suggest that teachers must incorporate into the learning environment both individual and collaborative types of response to the students and their work.

#### Scenario Three:

No statistically significant findings resulted from analysis of this data, neither with respect to males nor females.

#### Scenario Four:

No statistically significant findings resulted from analysis of this data with respect females; however,

significant findings did result in the male group. 26 males under the age of 9 years least favored Individual Competitive, while only 9 least favored Collaborative Non-Competitive. In the older age group the dominant least favored choice was Individual Non-Competitive, with 43 boys indicating this, and 25 more indicating Individual Competitive was least favored; by contrast, only 8 least favored Collaborative Competitive, with an additional 16 least favoring Collaborative Non-Competitive. These results again suggest that the boys in the older age group least prefer classroom learning experiences which are framed in an individualized format. A further observation involves the Individual Non-Competitive category; a definite shift of opinion occurred as only 14 of the younger group, but 43 of the older group, least favored this.

#### Scenario Five:

No statistically significant findings resulted from analysis of this data, neither with respect to males nor females.

#### Summary of Findings Pertaining to Research Question Five:

Findings pertaining to males under the age of 9 years resulted in only one case in which the Individual Competitive option was clearly the dominant choice, i.e., the scenario involving how students receive grades and feedback. A similar result occurred in the older male age group. Also a clear preference for collaborative options can be observed in both

male age groups.

Among females the findings differed somewhat from those of the males. Individual Competitive was not a clear favorite in any of the scenarios for girls under the age of 9 years. In the older age group, however, females indicated Individual Competitive to be the dominant choice in two scenarios, i.e., Scenario Two involving grades and feedback, and Scenario Five involving public recognition and awards. Overall, the girls showed preference for collaborative types of learning experiences; however, the pattern was not as pronounced as it was among the males in the study.

With respect to least favored category, a distinct pattern can be observed. Among both males and females in the younger age groups, Individual Competitive was clearly the least favored option in every scenario. Older students, both male and female, deviated from this pattern with respect to Scenarios One and Four. In each of these cases the older students least favored Individual Non-Competitive. These findings again reinforce the value of programming for gifted students which provides various opportunities for collaborative and/or team experiences, though not necessarily the formalized Cooperative Learning Models which espouse group goals and interdependent reward systems.

#### Findings Pertaining To Research Question Six



Is there a significant difference between the perceptions of gifted students who have participated in specialized programs vs. those who are new to such programs?

Controlling for Competition and Non-Competition, Chi Square analysis with Phi and Cramer V measure of association was calculated to compare for significant interaction between gender groups and history in the program groups (with history designated as those new to the program and those who have previously participated), in both most and least favorite categories.

#### Results Pertaining to Most Favorite Category:

No statistically significant findings resulted from analysis of this data, neither with respect to males nor females.

#### Results Pertaining to Least Favorite Category:

Findings significant at the  $p < .05$  level occurred in only two of the analyses, both of which involved Scenario Two.

To appropriately interpret these findings, it is necessary to consider some demographic facts which describe the subject population. As shown in Table 1, 358 subjects in total responded to the survey. Of this group, 206 were new to the program, while 152 had previously attended. 166 were male, and 192 were female. 163 were under 9 years of age; 195 were 9 years or older.

Of the 179 subjects who responded that competitive options were their least preferred choices, 79 were male and 100 were female. 57 males who were new to the gifted program responded that competition was least favored while only 22 who had previously participated least favored competitive options. 57 females new to the program least favored competition, while 43 previous attendees least favored competition. These findings were significant at the .03634 level.

Exactly one half of the total population of the study responded negatively to competitive options in the context of rewards and feedback. Less than half of the students who had previously participated disliked competitive options, but more than half of those new to the program indicated dislike. Further, males who had attended previously less frequently reflected dislike than did females in this category. The implications of these findings are ambiguous, leaving room for speculation, but certainly not for any firm conclusions. One possible interpretation of the clear shift observed between males new to the program, and previously attending males might be that experience in such programs serves to validate one's self-esteem, and therefore equip the person to confront competitive situations; while a slight similar shift can be observed among the females, the traditionally held belief that females are often more reluctant to be comfortable in competitive situations may be operative here.

Another 130 subjects responded to Scenario Two indicating

that non-competitive options were their least favorite choices. Of this group, 81 were new to the program; 49 had previously attended. 30 males who were new to the program and 28 who had previously attended responded that non-competition was least favored. 51 females new to the program, but only 21 females who had previously attended said non-competition was least favored. These findings were significant at the .02543 level. Further examination of these data reveal a strong shift in females' opinions between those new to the program and those previously attending, with new students reflecting a more predominant dislike for non-competitive options than previous attendees. However, it is important to note that the group responding here represents only 42% of the total respondents to this scenario. Reasons for these findings are unclear and further research is needed to determine interpretation. However, comparison of the responses here to the group described above, shows that approximately 58% of the total population responding to this scenario least favored competition.

#### Summary of Findings Pertaining to Research Question Six:

Findings pertaining to resultant differences associated with experience in a gifted program yielded fewer significant results than other analyses. However, in the two cases in which significance did occur it was related to students least favored options, and related again to the key scenario

involving how students prefer to receive feedback and grades. While interpretation of these findings remains ambiguous, two observations seem legitimate. First, once again it is clear that students dislikes are at least as well-defined as are their preferences. Second, the issue of grades, honor rolls, and forms of feedback does seem to be key for many gifted students.

#### Findings Pertaining To Research Question Seven

Is there a significant correlation between parents' responses and their gifted students' responses?

To respond to this question, the Phi Test was calculated for the five scenarios according to the four categories of responses both with respect to most and least favorite categories. to assess the level of correlation between parent and child perceptions.

#### Results Pertaining to Most Favorite Category:

Significant findings occurred when comparing parent and child responses to Scenarios One and Three. With respect to Scenario One which involved students' participation in academic bowls or contests, a high level of match between perceptions was found, with significance at the .00282 level.

Responding to Scenario Three, involving methods of entry into specialized summer programs, correlation was also found, with significance at the .03791 level. These findings suggest that parents of gifted children do understand at least some important perspectives which their children hold.

#### Results Pertaining to Least Favorite Category:

Significant findings occurred only with respect to Scenario Four involving usage of class time and special projects. In this case, correlation significance was at the .01747 level. It appears that parents do perceive fairly accurately the types of class projects which their children actively dislike. It could be speculated that students who are unhappy with the work with which they are faced on a daily basis in the school situation, may talk, or complain, to their parents to a sufficient extent that the parents gain an accurate picture of their child's views.

#### Summary of Findings Pertaining To Research Question Seven:

Parent - Child correlation of perception was supported in three of the ten analyses, five in the most favored category, and five in the least favored category. Consistent with findings throughout this study, Scenario One concerning academic contests again yielded the clearest results. Also of interest is the fact that parents were more accurate in

perceiving their child's most favored choices rather than their least favored choices. It might be hypothesized that parents tend to be more comfortable, and therefore listen and retain more of their child's statements when the child is happy; it may be more difficult to hear, and therefore take seriously, a child's complaints. Clearly, further research is needed to take such hypotheses out of the realm of speculation.

### Summary

Results of Research Question One, "Do gifted students prefer competitive or non-competitive learning situations?" strongly suggest that ,as a group, gifted children prefer non-competitive situations and dislike competitive situations. The only case which stood clearly as an exception to this generalization is that of involvement in academic contests and bowls.

Results of Research Question Two, "Do gifted students prefer collaborative or individualistic learning situations?" strongly suggest that, as a group, gifted children prefer collaborative situations and dislike individualistic situations. The one case which diverged from this pattern is that which involved grades and feedback.

Results of Research Question Three, "Are the perceptions of gifted children regarding competition significantly different when the competition occurs in a team or

collaborative setting vs. an individualistic setting?" suggest that the collaborative vs. individualistic settings do impact on students' preferences. With the exception of the one case involving grades and feedback, competition appears to be more palatable when it occurs in a collaborative or team situation. In none of the five scenarios was Collaborative Competitive the least favorite option.

Results of Research Question Four, "Are there significant age level differences in gifted children's responses to competitive situations?" suggest that while there is much agreement between the younger and older age groups, specific situations exist in which a significant difference is observed. The first involved the manner in which grades and feedback are received; younger students prefer Collaborative Non-Competitive approximately as frequently as Individual Competitive, whereas older students strongly prefer Individual Competitive with Collaborative Non-Competitive ranking as least frequently selected option. The second clear difference between the age groups involved public recognition; younger students' preferences were relatively undifferentiated with Collaborative Non-Competitive scoring last, while older students first choice was Collaborative Non-Competitive. In the least favorite category a third clear difference resulted. Older students strongly indicated Individual Non-Competitive to be least frequently chosen, while younger students said Individual Competitive was least favored, with Individual Non-

Competitive at distant second rank for least favorite.

Results of Research Question Five, "Are there significant gender differences in gifted children's responses to competitive situations?" suggests that both males and females generally prefer collaborative types of learning experiences though females preferences are not as strongly indicated. However, a difference was observed in that females favored individualistic options more frequently than did males.

Results of Research Question Six, "Is there a significant difference between the perceptions of gifted students who have participated in specialized programs vs. those who are new to such programs?" yielded significant findings with respect to the scenario involving grades and feedback. Males who had experience in a gifted program cited competition as their least favorite significantly less frequently than did others in the study. By contrast, females who had prior experience in a gifted program cited non-competition as their least favorite significantly less frequently than did others in the study.

Results of Research Question Seven, "Is there a significant correlation between parents' responses and their gifted students' responses?" suggest that parents are more accurate at matching their child's perceptions with respect to most favorite options, as significant correlation occurred for two of the scenarios. With respect to least favorite options, a significant correlation occurred for only one of



the scenarios.

## CHAPTER FIVE

### CONCLUSIONS AND DISCUSSION

The overall purpose of the study described here was to examine gifted students' perceptions regarding their preferences for competitive and non-competitive learning situations when cast in individualistic or collaborative /team settings. Seven research questions were addressed, three dealing with the group's preferences as a whole, three dealing with significant differences among sub-groups within the overall population, and the last one dealing with relationships between parent and child perceptions of the learning environment. Two versions of the survey questionnaire were crafted to appropriately elicit opinions from both younger and older students with respect to their preferences for various types of competitive or non-competitive learning environments.

Most previous studies involving competition have not addressed gifted students' preferences, nor the effects of competition on these students' motivation or comfort level. While many theoretical divisions and disagreements exist within the field of gifted education, a basic concern for

providing learning situations in which these children also can reach their potential is a common unifying theme which binds the field together. It is at this point that issues involving competitive, individualistic, and collaborative situations must be considered.

### SUMMARY OF THE FINDINGS

#### Findings Related to Competition

A foundational aspect on which the rationale for many competitive situations rests is the tacit assumption that if one wins, the effects are positive. However, this study essentially probed issues surrounding the question: Is winning at competition, for those few who can, perceived as a positive situation, or might there be negative side effects? This was done through an effort to gain some insight into the gifted child's preferences and feelings. As shown in Table 8, it appears that gifted children prefer non-competitive learning experiences more frequently than competitive experiences, and analogously, they appear to dislike competitive situations more frequently than non-competitive situations. The clearest finding which ran throughout the various analyses of the data involved academic contests or bowls. Subjects consistently indicated a preference for participating in such events providing they did so as a member of a team; further, they indicated dislike for participating in such competitive events on an individual basis. This is the only case in which a

FINDINGS RELATED TO COMPETITION

Favorite

Scenario	Competitive	Non Competitive
1	✓	
2	✓	
3		✓
4		✓
5	✓	✓ *

Least Favorite

Scenario	Competitive	Non Competitive
1		✓
2	✓	
3	✓	
4	✓	✓ *
5	✓	

✓ = dominance preference  
\* = slightly stronger preference

competitive option was the clear choice of the group as a whole, and the non-competitive option was clearly perceived negatively by the group as a whole.

### Findings Related to Collaborative and Individualistic Situations

As shown in Tables 9 and 10, subjects' response patterns reveal a preference for collaborative types of experiences. Only when responding regarding how they prefer to receive grades and feedback, did the group as a whole respond in favor of individualistic options. This is a particularly noteworthy finding in light of the current controversy regarding the implementation of cooperative learning models with gifted students. According to Slavin (1980), cooperative learning "refers to classroom techniques in which students work on learning activities in small groups and receive reward or recognition based on their group's performance" (p.315). Since operationalizing the cooperative learning models generally involves goal interdependence and common reward structures, this finding would seem to imply some modification of those conditions are necessary if large numbers of gifted students' preferences are to be considered.

Examination of the overall group's dislikes involving collaborative and individualistic situations reveals a clear pattern of dislike for individualistic options. These findings are interesting from two perspectives. First, with

FINDINGS RELATED TO COLLABORATION VS. INDIVIDUALISTIC

Favorite

Scenario	Collaborative	Individualistic
1	✓	
2		✓
3	✓	
4	✓	
5	✓	✓ *

Least Favorite

Scenario	Collaborative	Individualistic
1		✓
2		✓
3		✓
4		✓
5		✓

✓ = dominant preference  
\* = slighty stronger preference

'FINDINGS RELATED TO COMPETITION AND COLLABORATION

Favorite

Scenario	Individual Competitive	Collaborative Competitive	Individual NonCompetitive	Collabo- rative
1		/		
2	/			
3				/
4				/
5	/			✓

Least Favorite

Scenario	Individual Competitive	Collaborative Competitive	Individual NonCompetitive	Collaborative NonCompetitive
1			/	
2	/			
3	/			
4	/		/ *	
5	/			

|/ = dominant preference

\* = slighty stronger preference

respect to the cooperative learning models debate referred to above, it appears that a similar number of subjects least preferred individual options; this suggests that both types of rewards or recognition should be incorporated into gifted programming. Given these findings neither the automatic and inflexible use of interdependent goal structures, nor of individualistic structures, should be brought whole-cloth into gifted programs. Sensitive implementation of awards and recognition for work completed, including a differentiated plan for giving feedback to students appears to be indicated.

The second perspective involving these findings relates to an all too frequently held myth that gifted children prefer to work alone, i.e., that they are somewhat inclined toward social isolation. The pattern shown in Tables 9 and 10 clearly refutes this, as the dominant number of subjects consistently rejected individualistic options, and preferred collaborative options which allow them to socialize in the context of their learning experiences. This should not, however, be interpreted as a confirmation of the automatic appropriateness of cooperative learning models for gifted students. As noted above, large numbers of them clearly rejected the goal interdependence for awards and recognition which is an integral aspect of those models. Further research on the usage of the cooperative models' techniques is indicated; such research must examine other related issues



beyond the scope of this study. Hence, these findings constitute neither an overall rejection, nor assent, to cooperative learning with gifted populations; rather, an appropriate interpretation is the necessity of caution and care when adapting them to gifted classrooms.

### Findings Related to Age Level Differences

Several highly significant findings resulted from the analysis of age level differences. While age groups often were in agreement both with respect to preferences and dislikes, in four of the comparisons, the groups diverged. As shown in Table 11, in general both groups preferred collaborative options, with non-competitive forms of collaboration most frequently selected. The one exception was the scenario regarding feedback; in this case individual options were most clearly favored by the older group, and split among the younger group. Similarly, the groups tended to agree with respect to their dislikes; individual competitive options fared the worst across age levels.

Among the noteworthy differences revealed were a disagreement regarding the scenario involving feedback. Children under 9 years of age were virtually evenly split between competitive and non-competitive options, and individualistic and collaborative options; i.e., the group reflected a relatively undifferentiated profile. However, examination of the data with respect to the older students

## Favorite

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9 ----- 9 & Older	---	✓ --- ✓	---	---	.00009
2	Under 9 ----- 9 & Older	✓ --- ✓	---	---	✓ * ---	.00003
3	Under 9 ----- 9 & Older	---	---	--- ✓	✓ ---	.07825
4	Under 9 ----- 9 & Older	---	---	---	✓ --- ✓	.00261
5	Under 9 ----- 9 & Older	✓ ---	---	✓ ---	--- ✓	.00019

## Least Favorite

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9 ----- 9 & Older	✓ ---	---	--- ✓	---	.00000
2	Under 9 ----- 9 & Older	✓ --- ✓	---	---	---	.07496
3	Under 9 ----- 9 & Older	✓ --- ✓	---	---	---	.27991
4	Under 9 ----- 9 & Older	✓ ---	---	--- ✓	---	.00755
5	Under 9 ----- 9 & Older	✓ --- ✓	--- ✓ *	---	---	.27167

✓ = dominant preference

\* = slightly stronger preference

showed that this was not the case among students 9 years and older. This group clearly favored individual options regarding feedback procedures, with the least favored choices falling in the collaborative categories. This finding suggests that those students with more time in the school setting may have experienced types of feedback which are clearly distasteful to them.

A similar result occurred in Scenario Five, with younger students reflecting relatively undifferentiated profiles, but older students showing clear preferences regarding types of public recognition. The two groups also clearly diverged in terms of least favored options regarding academic contests. Students 9 years and above clearly disliked individual non-competition, whereas the younger students clearly disliked individual competition. An analogous finding occurred with regard to least favored options involving use of classroom time; again, the older students least preferred individual non-competitive, while the younger group least preferred individual competitive. These findings were all at the statistically significant level.

In summary, then, it does appear that younger students who may still be in the "romance relationship" with the school experience, more frequently reflect undifferentiated profiles than do older students. However, this should not be interpreted to mean that their preferences are not well-defined in many cases; such an interpretation would be a gross

over-generalization of the data.

### Findings Related to Gender Differences

Examination of this data also resulted in several significant findings. (See Tables 12 and 13.) While both males and females in general preferred collaborative options, the males showed a stronger preference than did the females. Boys in the older group reflected a stronger preference for Collaborative Competitive, while the younger boys reflected a slight preference for Collaborative Non-Competitive options. It might be speculated that older males have had more opportunity to participate in athletic experiences which are so much a social focus for males; hence, the "payoffs" for such efforts may explain this finding.

While females in general did favor Collaborative options, their preference was not as clear as their male counterparts. Further, the older girls only chose Collaborative Competitive in the scenario involving academic contests, and Collaborative Non-Competitive in the scenario involving usage of class time. Again, it may be that girls are not socialized into various types of team competitions to the extent that boys are involved, and hence their responses to these possibilities are less predominant. It is interesting to note that the older girls did select Individual Competitive options in two of the scenarios; namely, the scenario involving grades & feedback, and the scenario involving public recognition and awards.

Table Twelve

## FINDINGS RELATED TO GENDER

## Favorite-Males

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9 ----- 9 & Older	---	✓ ----- ✓	---	---	.03009
2	Under 9 ----- 9 & Older	✓* ----- ✓	---	---	✓ ----- ---	.05617
3	Under 9 ----- 9 & Older	---	✓* ----- ✓	✓ ----- ✓	✓ ----- ✓	.27800
4	Under 9 ----- 9 & Older	---	✓ ----- ---	---	✓ ----- ---	.07970
5	Under 9 ----- 9 & Older	✓* ----- ---	---	✓ ----- ---	✓ ----- ✓	.00322

## Favorite-Females

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9 ----- 9 & Older	---	✓ ----- ✓	---	---	.00208
2	Under 9 ----- 9 & Older	✓ ----- ---	---	---	✓ ----- ---	.00034
3	Under 9 ----- 9 & Older	---	---	✓ ----- ---	✓ ----- ---	.26283
4	Under 9 ----- 9 & Older	---	---	---	✓ ----- ✓	.05461
5	Under 9 ----- 9 & Older	✓ ----- ✓	---	✓ ----- ---	---	.04807

✓ = dominant preference

\* = slightly stronger preference

## Least Favorite-Males

Scenario		Ind. Comp.	Collab. Comp	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9 ----- 9 & Older	✓ ---	---	✓ ---	---	.00000
2	Under 9 ----- 9 & Older	✓ --- ✓	✓ ---	---	---	.00174
3	Under 9 ----- 9 & Older	✓ --- ✓	---	---	---	.50479
4	Under 9 ----- 9 & Older	✓ ---	---	✓ ---	---	.01196
5	Under 9 ----- 9 & Older	✓ --- ✓	✓ ---	---	---	.16098

## Least Favorite-Females

Scenario		Ind. Comp.	Collab. Comp.	Ind. NonComp.	Collab. NonComp.	Significance
1	Under 9 ----- 9 & Older	✓ ---	---	✓ ---	---	.00000
2	Under 9 ----- 9 & Older	✓ --- ✓	---	---	---	.65417
3	Under 9 ----- 9 & Older	✓ --- ✓	---	---	---	.06522
4	Under 9 ----- 9 & Older	✓ ---	---	✓ ---	---	.11039
5	Under 9 ----- 9 & Older	✓ --- ✓	✓ --- *	---	---	.72171

✓ = dominant preference



= slightly stronger preference

This finding suggests that the older girls favor non-interdependent goal and reward structures. Among the younger females the dominant choice was Collaborative Non-Competitive, with Collaborative Competitive predominating only with respect to the academic contest scenario.

Examination of males' responses to Scenario Five regarding public recognition revealed significant difference between the two age groups. The older boys preferred the collaborative options, especially Collaborative Non-Competitive, while the younger group were clearly less differentiated and showed a slight preference for individual options.

Responses of females to Scenario Two involving grades and feedback also reflected significant divergence of opinion between the two age groups. Younger girls were virtually split between Individual Competitive and Collaborative Non-Competitive as their first choice, but showed a slight overall preference for individual options. Older girls, however, reflected a clear preference for Individual Competitive, and an even stronger preference for individual options in general. By comparison, males responded similarly with older boys showing strong preference for individual options and younger boys showing some preference, but not so strong. These findings again reinforce the implications for cautious use of the group reward/feedback aspect which is integral to most cooperative learning models.

As shown in Table 13, responses to least favorite options revealed significant dislike for Individual Competition in the majority of cases. Males and females in both age groups most frequently indicated that they least favored Individual Competition; this finding was consistent across most of the scenarios. Clearly, these gifted students are telling us that they do not wish to be competitively pitted against their peers, despite the fact that they are precisely the ones who seem to be equipped to win. This suggests that from their perspective, winning at competition may not be primarily a positive experience, and in fact may present negative side effects. Further research is needed to probe more specifically into these issues.

#### Findings Related to History in the Program

Analysis of the data related to the influence of prior history in the program resulted in no significant findings with respect to students' most favored choices. However, with respect to the least favored category, significant findings did result from examination of the data set involving Scenario Two which involved grades and feedback. Males who were new to the program more frequently reflected dislike for competition than did males who had previously attended. Females also reflected a significant shift in opinion with respect to Scenario Two. Females new to the program more predominantly disliked non-competitive options than did those



who had previously attended.

Based on this data, prior experience in a gifted program does not appear to heavily influence students' perceptions regarding competition and learning environments. However, this finding ought not to be generalized to conclude that experience in such programs does not influence the students' overall development. It should be remembered that the scope of these scenarios and questions dealt with learning environments; therefore, any conclusions involving the impact of gifted programs on other aspects of growth such as affective development or self-esteem issues, would not be supported by this data set.

#### Findings Related to Parent-Child Correlation of Opinions

Findings involving the correlation of parent-child perceptions suggest that there is some support for the belief that parents of gifted children reflect accurate understanding of their children's preferences at least regarding certain aspects of the school experience. Significant correlations resulted in terms of the most favored options with respect to academic contests and with respect to entrance into special programs. Further, significant correlations resulted in terms of least favored options with respect to usage of class time.

These findings are of special interest in that it is frequently a parent advocate who comes to school to plead a child's case, often involving requests for some modifications

or adaptations of the existing learning program or situation. As long as educators subscribe to the belief that the parent is often an unreliable evaluator of their child's situation in school, the likelihood of taking such parental pleas seriously is diminished. However, if educators accept the fact that many parents of gifted children do reflect clear understanding of their child's views, then the chance of a productive joint relationship between school and home, both working for the good of the student, is likely to be heightened.

### Conclusions

Taken as a whole, the findings related to the research questions addressed here, shed considerable light on preferences of gifted students regarding competition in the learning environment as well as their preferences regarding collaborative or individualistic types of learning situations.

The findings support the conclusion that, with few exceptions, gifted students more frequently favor non-competitive settings; the findings also support the conclusion that these students generally favor collaborative types of settings whether or not competition is involved.

The results also support the conclusion that there is some basis for taking parental perceptions of their child's preferences into consideration when planning programs to meet the needs of the gifted learner.

Differences between most favored options and least favored options were also investigated. The findings support the importance of considering least favored responses, as these were at least as clearly defined, if not more so, than were most favored responses.

### Discussion

Closer examination of the responses of the students in terms of age level differences reveals patterns which confirm that the younger students' views are more often less differentiated than the views of the older groups. While similarities between the two age groups' preferences did occur, the younger students dominant choices were not as clearly reflected; (i.e., they tended to distribute their responses across categories more evenly than did their older peers). This could be interpreted to support the notion that during the early "romance relationship" with school, many young gifted try very hard to please the adults around them, and hence to acquiesce in whatever learning situations they find themselves. Thus, a less differentiated profile of preferences would result.

Comparison of gender differences surfaced a finding not necessarily in the tradition of some of the literature concerned with the "mysterious disappearance of the gifted girl." As stated in Chapter One, many researchers to date state concern that the pressures to "go underground" begin to

impede heavily at approximately middle or junior high school level. The results of this study identify females more frequently selecting Individual Competitive options than did males, and in particular, the older girls favored these choices more often than did older boys. One possible interpretation might be that progress is being made in nurturing the girls' self-esteem, such that they do not feel they need to conceal their talents to the same extent as did their female predecessors. However, when examining overall response to competition (i.e., including collaborative options), the males still favored competitive options slightly more often than did females.

Another area of interest on which this study impacts involves the controversy related to the use of cooperative learning models with gifted students. As one important and integral element of most of these models involves goal interdependence and group rewards, one of the findings of this study identifies a problematic area for a large number of gifted students who would experience these types of learning environments. The second scenario dealt with various forms of feedback involving grades and honor rolls, with options involving individual or group rewards. Over 60% of the subjects indicated that their most preferred choices involved individualistic ways to receive grades or awards. This was the only case in which individualistic options were clearly favored. This finding clearly suggests that a great portion

of the gifted student population may find it uncomfortable and/or unproductive to receive group feedback. This is not an argument against using collaborative learning experiences with gifted children; but rather it seems that the various adaptations of the cooperative learning models should be considered instead of automatically transferring them to this unique group of learners.

A foundational issue of this study concerned possible potential damage to the gifted child who is consistently placed in competitive situations. As stated in Chapter One, Dabrowski (1977) believed the importance of social relationships to be a key aspect of the highly influential OE of emotional overexcitability. Silverman (1988) speaks of "intensities" which frequently impact the gifted child as they sort out problematic situations. Thus, the concern here was whether the juxtaposition of these inner sensitivities with consistent pressure to win out over one's peers, might present a damaging dilemma for the developing young gifted person. While this study is not designed to attempt to directly answer this concern, some of the findings do offer some insights into the question. The students reflected individualistic situations consistently to be least favored, and collaborative generally to be preferred; this finding underscores the desire to be connected with friends, and certainly offers support for debunking the myth that gifted children are anti-social or isolationist. In his work with gifted students aged

12 - 17, in attempting to assess the components of giftedness through Dabrowski's model of developmental potential, Piechowski (1984) described emotional OE as "strong attachment to persons,... intensity of feeling, and awareness of its full range." (p. 82) The results of this study interrelate and support this position, as non-competitive was generally preferred, and competitive was more frequently cited as least favored. These students appear to be clearly telling us that they do not wish to be at odds with peers, that relationships are important.

While Dabrowski's theory does not focus on interpreting the levels in the context of children, the developmental potential aspect, (i.e., the OE's), has been researched with youngsters (Gallagher, 1986; Schiever, 1985), and does bear directly on this study. The question, "Why do some gifted youngsters become underachievers, while others become successful and high achieving?" concerns many theorists. (Kaufmann, 1986; Rimm, 1988; Whitmore, 1980). The results of this study could be interpreted in Dabrowski's terms to suggest that the children, from earliest experiences in school, are often delivered messages which may block the highly influential emotional OE, hence aborting potential for growth through the levels, regardless of evidence of high intellectual ability such as exceptionally elevated IQ scores. In their initial research, Dabrowski & Piechowski (1977) found that intelligence did not correlate with level of development.

Further, Silverman & Ellsworth (1980) cited research conducted at the University of Denver which supported the finding that emotional OE equalled intellectual OE among the gifted population in their study, and concluded: "The strength of the emotional overexcitability in this group gives even stronger evidence of the potential for multilevel development. Attainment of the highest levels is not possible without extraordinary emotional development."

Thus, it may be that learning situations which negatively impact the youngster's sense of connectedness to others, to the "strong attachment to persons" to which Piechowski alludes, could contribute to the underachievement problem among students designated as "gifted" based on high measured ability, (i.e., high intelligence). If a child repeatedly experienced situations which cast him/her at odds with peers, thereby causing consistent distancing from appropriate attachment to persons, from the perspective of the Theory of Positive Disintegration one might anticipate interference with emotional overexcitability, which in turn might diminish the potential for development. The findings of this study show gifted children generally rejecting individualistic situations, and more frequently rejecting competitive types of experiences than non-competitive.

#### Implications for Education

This results reported here have numerous implications for

both teachers and administrators involved with developing educational programs and models for gifted children. Understanding the affective, as well as the cognitive needs of this child, is necessary if potential for full development is to be enhanced. It is necessary to view the gifted student as a whole child; in the words of the well-respected gifted educator, Anna Marie Roeper, the gifted child is a person who "is average with gifts, not exceptional with faults." It is my belief that Roeper's comment cuts to the heart of this study (i.e., when designing environments for gifted students, educators must begin with a concern for this student as a unique person with emotional and social needs just as other students have such needs). The research project described here was designed to focus on these needs; the resultant awareness of these students' preferences should lead to more appropriate educational situations for these learners.

#### Suggestions for Further Research

Certainly there is a need for more research in the area of perceptions and preferences among gifted students regarding their learning situations. Hopefully this research will lead to increased efforts to understand the gifted child as a developing young person whose affective dimension influences school performance, just as the affective dimension influences other children. Several areas emerge as possible directions for future study.



Further research is needed to ascertain the relationship between the stated preferences of gifted students and the actual effects on motivation and general response to the learning environment. Such studies would likely need to be of an experimental nature.

Further investigation of gender differences also appears indicated, as the findings from this study suggested a possible shift toward females being somewhat more comfortable with competitive situations than formerly suggested by the literature. Replication of this type of research would be necessary to verify or discount any such conclusions.

The second scenario of this study involved an element which is key to cooperative learning models, and raised concern for the effects of group interdependent goals and reward structures. However, as this is only one aspect of the cooperative models, much further research is needed in the context of gifted education in order to derive any definitive conclusions regarding the cooperative learning debate. Clearly, students in this study said they wanted to work collaboratively, though this is not tantamount to an endorsement of the formal cooperative learning models.

Silverman & Ellsworth (1980) concluded that future research is needed to unlock the dynamics which nurture developmental potential, and that longitudinal study of gifted children is desirable. Given that several parents of students in this study indicated that they were interested in

participating in a longitudinal study involving their gifted child, further research which examines the factors which influence the development of gifted children is planned.

### Concluding Remarks

Gifted education is not new; it has been with us since Plato alluded to it when he advocated selecting potentially gifted children in early childhood, testing them, and educating them for leadership roles in society. Early in this country's development, gifted individuals were valued, as leadership was imperative for survival; Thomas Jefferson proposed the legislative bill, "The Diffusion of Education," which provided for university education of promising American youth at public expense. However, since then the "melting pot" theme has come to dominate American attitude, and education for the gifted has often been charged as "undemocratic" or "elitist." As equal rights became associated with sameness or conformity, the gifted education movement has often suffered from the view that providing education aimed at allowing gifted students to reach their potential somehow implies unfairness to other students. In actual fact, all that is being asked is to provide these students with the same opportunity as is provided to other students (i.e., the opportunity to maximize one's natural potential). From a research point of view, comparatively few dollars have been directed toward investigating how best to

nurture the gifted youngsters in our population, but such research efforts must continue and must expand. With a good understanding of these children's needs, educators will be better equipped to provide appropriately for these students maximal development. The misunderstanding of these children due to the damaging myth that advocating gifted education is somehow "undemocratic," must be avoided as we move toward understanding these youngsters in order to provide for their needs.

"There is nothing more unequal than the  
equal treatment of unequals."

Thomas Jefferson

## APPENDIX

Survey Questionnaires

Protocols

Name \_\_\_\_\_ Age \_\_\_\_\_ Grade \_\_\_\_\_ Sex \_\_\_\_\_

Address \_\_\_\_\_ School \_\_\_\_\_

Including this year, how many summers have you attended this program? Circle the correct number. 1 2 3 4 5

Please read the following scenarios. Then put a "+" on the line before the option which you would most prefer. Next, put a "-" on the line before the option you would least prefer.

1. If you were chosen to represent your school as a member of a team at an Academic Super-Bowl where many Trivia & Jeopardy-type questions will be asked, how would you like the idea?

- \_\_\_\_\_ I'd prefer competing individually at the contest.
- \_\_\_\_\_ Forget it; I'd rather stay in the classroom & do an extra project of my own instead.
- \_\_\_\_\_ I'd like to be part of a team or group that works together, but skip the contest part.
- \_\_\_\_\_ I'd probably enjoy being on the team, and going to the Academic Super-Bowl.

2. Many parents want to improve the Honor Roll system at your school. These are the suggestions they are making:

A "Super Scholars" Honor Roll for the top ten students in school. A similar idea is the "Super Scholars" Honor Roll for small groups of students who work together to learn the material. Another idea is the "BUG" Roll; it stands for Bringing Up Grades. Any student who brings up a grade, whether A,B,C,D, or F is on the BUG Roll. It could also work for groups of students studying together to bring up grades; then the group could earn the BUG Roll. Which idea do YOU hope they choose?

- \_\_\_\_\_ "Super Scholars" for the top ten students.
- \_\_\_\_\_ "Super Scholars" for small groups of students working together.
- \_\_\_\_\_ The BUG Roll for any student who brings up a grade.
- \_\_\_\_\_ The BUG Roll for groups working together to improve grades.

3. Imagine that you and your good friend both want to be chosen to study in a special summer program; however, your school may select only one student based on grades and past performance in school. YOU are selected because your grades and test scores are slightly higher than your friend's. What advice would you give to those setting up the selection of students for next year?

- ☐ Each school should be allowed to select a small group of students.
- ☐ Any interested student who is qualified may attend.
- ☐ Schools should be allowed to send as many small groups of students as are honestly interested and qualified.
- ☐ Keep the system the same; somebody has to win.

4. Your teacher is considering several ideas for a study project this year. Students could choose a topic of special interest, and really have a chance to "do their own thing." Students could "link up" with others of the same interest, and work on joint investigations. Time might also be spent in preparation for contests with other schools on selected topics of interest. At the contest students could either be on a team, or could compete "one to one" with another student. Which idea do you prefer?

- ☐ Preparing to be a team member at the contests.
- ☐ Preparing to compete individually at the contests.
- ☐ Linking up with other students to pursue a special topic.
- ☐ Studying a topic individually, "doing your own thing."

5. Your school is doing away with the traditional Awards Assembly which honored the highest student in each class; instead, the principal plans to give an award to the homeroom with the highest average. Some teachers prefer replacing the Awards Assembly with a festival of student projects; students might work individually or on teams to prepare the projects. Parents would be invited. Which option do you like the best?

- ☐ I'd enjoy the festival, providing I could work individually.
- ☐ I'd enjoy the festival, if we prepared together in teams.
- ☐ I like the idea of the highest homeroom getting an award.
- ☐ I wish they'd leave it the old way, where the highest student in each class receives an award.

What other advice do you have for your teachers about contests, or prizes, or your favorite way to learn?

( You may write on the back of this page. )

THANKS FOR TAKING THE TIME TO FILL THIS OUT !!!

## FAVORITE AND NOT-SO-FAVORITE THINGS ABOUT SCHOOL

Your Name \_\_\_\_\_

Did you attend this program last summer? Yes \_\_\_\_\_ No \_\_\_\_\_

Read the little stories silently while your teacher reads them aloud. Then put a "+" on the line before your favorite choice. Next put a "-" on the line before the choice you most dislike.

1. If your teacher picked you to be on a team to represent your school at a contest where lots of questions about things you've studied would be asked, how would you like the idea?

- \_\_\_\_\_ I'd rather answer the questions at the contest all by myself, and not be on the team.
- \_\_\_\_\_ I'd rather do an extra project in my own classroom instead.
- \_\_\_\_\_ I'd rather work with a group in my classroom; I don't like the contest part.
- \_\_\_\_\_ I'd like being picked for the team, and going to the contest.

2. Moms and dads at your school have made some suggestions about rewarding kids for getting good grades. Put the "+" sign by the idea you like best. Then put the "-" sign by the idea you dislike the most.

- \_\_\_\_\_ A "Super Students" Honor Roll for the highest 10 students in school.
- \_\_\_\_\_ A "Super Students" Honor Roll for small groups of students who work together to do their assignments.
- \_\_\_\_\_ A special Honor Roll for any student who improves a grade.
- \_\_\_\_\_ A special Honor Roll for small groups of students who improve their grades by working together.

3. Pretend that you and your best friend both want to be picked to go to a special summer program, but your school may only pick the one child with the highest grades this year. Imagine that YOU are the one who gets chosen this year, and the people in charge ask which way they should pick students for next year. Which of these 4 ideas is the best? Which is the worst idea?

- \_\_\_\_\_ Schools will be allowed to send a small group of students.
- \_\_\_\_\_ Any interested student with good grades may attend.
- \_\_\_\_\_ Schools will be allowed to send as many groups of students as are interested, if they have good grades.
- \_\_\_\_\_ Keep the picking the same as this year; somebody has to win.

4. Your teacher is planning a special study project for your class this year. Here are the things your teacher might let the class do. Mark which one you would like the most and the one you'd like the least.

- \_\_\_\_\_ Being allowed to do a special project, all by yourself, on whatever subject you want.
- \_\_\_\_\_ Being allowed to "team up" with a few other kids to do a special project on your favorite subject.
- \_\_\_\_\_ Using the study time to get ready to be a team member who goes to school contests.
- \_\_\_\_\_ Using the study time to get ready to go to school contests where each student answers questions individually.

5. Imagine that the principal at your school is planning an ice cream party for the homeroom with the highest grades. Some of the teachers have other suggestions. Which of the following 4 ideas is the best idea, and which is the worst?

- \_\_\_\_\_ Have a festival of students' own work, and let moms & dads visit.
- \_\_\_\_\_ Have a festival of projects which students have worked together to prepare.
- \_\_\_\_\_ Do the principal's idea of the ice cream party for the highest homeroom.
- \_\_\_\_\_ Give the highest student in each class a special award at a big school assembly.

THANKS FOR ANSWERING THESE QUESTIONS!!!



## PROTOCOL

To Teachers Administering the Survey to Grade 2 & 3 Students:

Please use the following introduction when you present the survey to the students.

"We're going to take a few minutes now to answer some questions about school. As you know, students are asked to participate in many kinds of activities. Some you may like; others you may dislike. This is your chance to tell us what you would prefer at school."

"I will read each of the little stories aloud, while you read them silently. Then we will read each of the choices which come after the story."

"Mark the choice you would most prefer by putting a "+" on the line before it. Then mark the choice you would least prefer by putting a "-" on the line line before it."

"Now fill in the information at the top of the page before we begin to read the scenarios. First, write your name on the line at the top of the page. Then put a check mark after "Yes" if you came to this CAMP program last year. Put a check after "No" if you did not come to this CAMP program last year."

When all students have completed the information section, begin reading the scenarios together as directed. After each scenario reading, please restate the directions to mark one's favorite choice with a "+", and one's least favorite with a "-".

Thanks you.

## PROTOCOL

## To Teachers Administering the Survey:

Please use the following introduction when you present the survey to the students.

"We're going to take a few minutes now to answer some questions about school. As you know, students are asked to participate in many kinds of activities. Some you may like; others you may dislike. This is your chance to tell us what you would prefer at school."

"Please read each of the following scenarios. There are 4 choices after each. Mark the choice you would most prefer by putting a "+" on the line before it. Then mark the choice you would least prefer by putting a "-" on the line line before it."

"Be sure to fill in the information at the top of the page before you begin to read the scenarios. Thank you."

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for significant interaction between age groups and gender differences in both most and least favorite categories.

## VITA

Mary Christensen received her A. B. in Elementary Education from Washington University in St. Louis where she subsequently did graduate work in Philosophy. She received her M. S. in Special Education, with emphasis in Gifted Education, from Rosary College in River Forest, Illinois.

Her professional experience includes: teaching Philosophy at the undergraduate level; teaching adult education courses at a secondary district evening school program; teaching a variety of elementary grade levels, grades 1 - 8; teaching gifted students, grades 1 - 8; designing and directing the development of elementary gifted programs; developing a variety of curricula and instructional units particularly appropriate for academically talented students; teaching special education courses at the graduate level. Currently, Mary is a District Coordinator of Gifted Education in Lake County, Illinois. She has consulted widely with various schools and districts on topics related to gifted education and critical thinking skills, and is a frequent speaker for gifted advocacy and parent groups.

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